

FIG.1

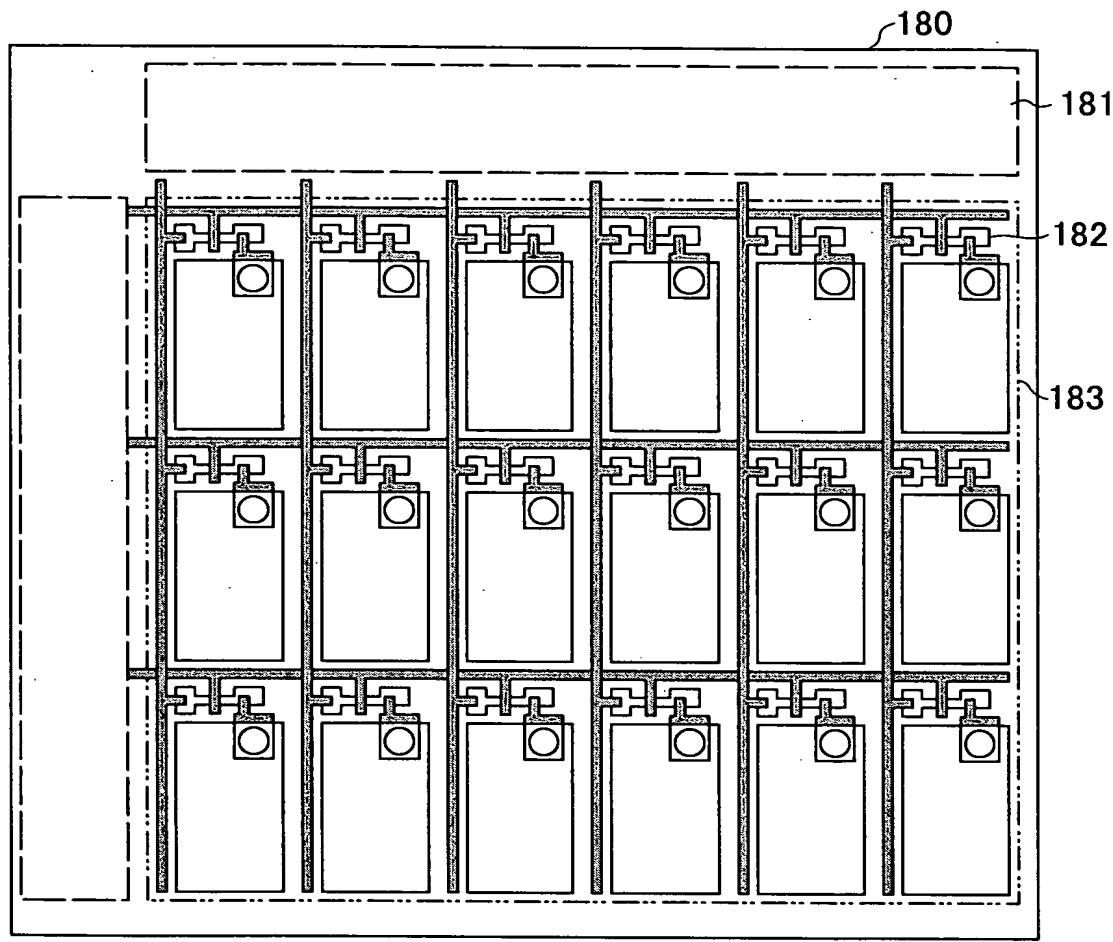


FIG.2

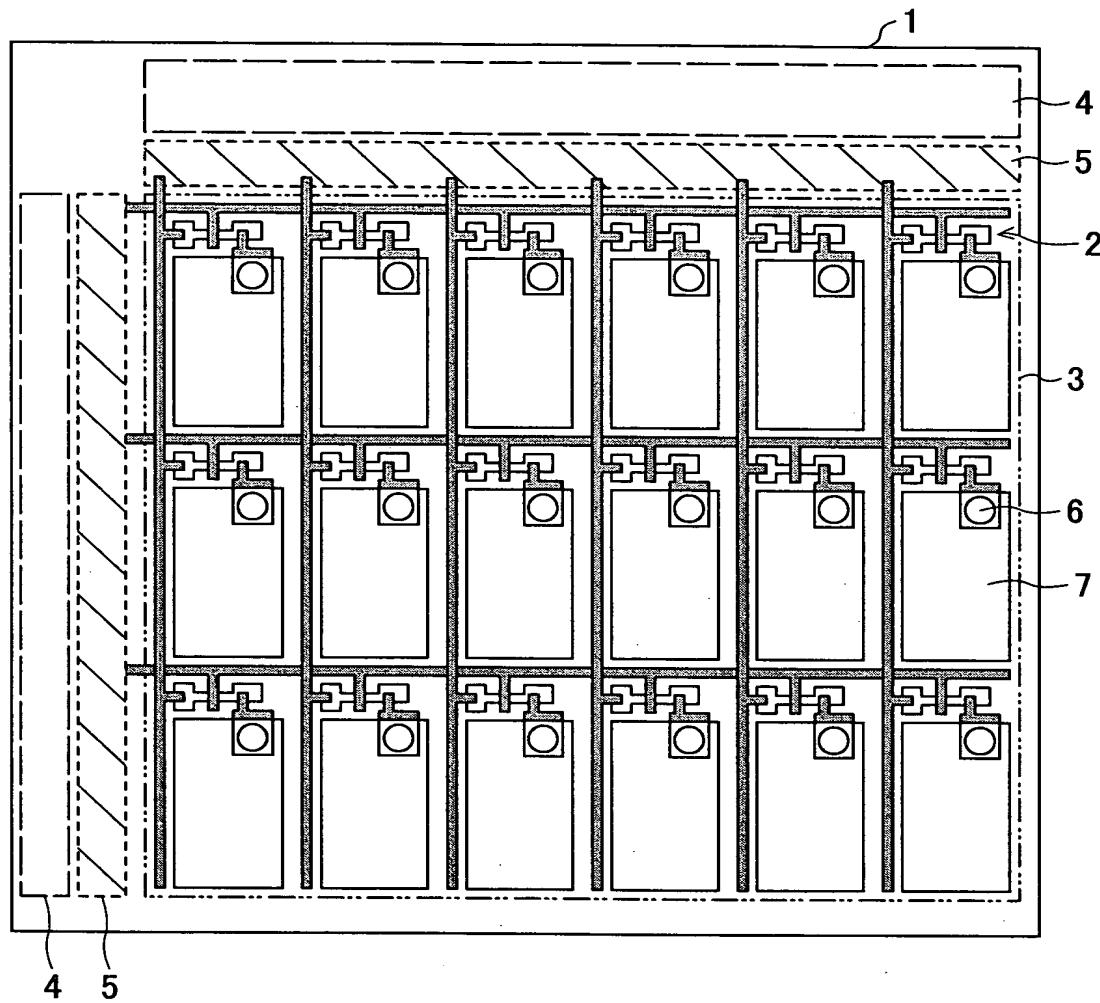
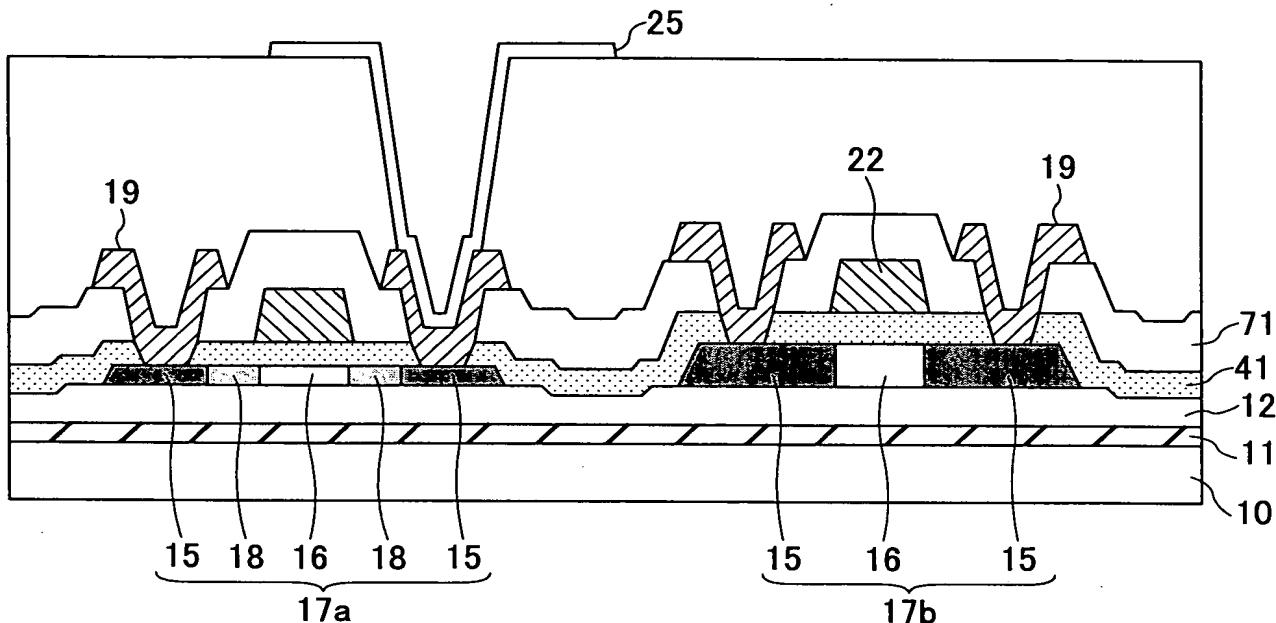


FIG.3



- 10 TRANSPARENT INSULATING SUBSTRATE
- 11 BASE SiN FILM
- 12 BASE SiO₂ FILM
- 15 SOURCE / DRAIN
- 16 CHANNEL REGION
- 17a,17b ACTIVE LAYER (SEMICONDUCTOR FILM)
- 18 LDD
- 19 SOURCE/DRAIN ELECTRODE
- 22 GATE ELECTRODE
- 25 PIXEL ELECTRODE
- 41 GATE INSULATING FILM
- 71 INTERLAYER INSULATING FILM

N CHANNEL EXCIMER CRYSTALLIZATION REGION
P CHANNEL EXCIMER CRYSTALLIZATION REGION
HIGH SPEED OPERATION REGION
HIGH SPEED OPERATION REGION

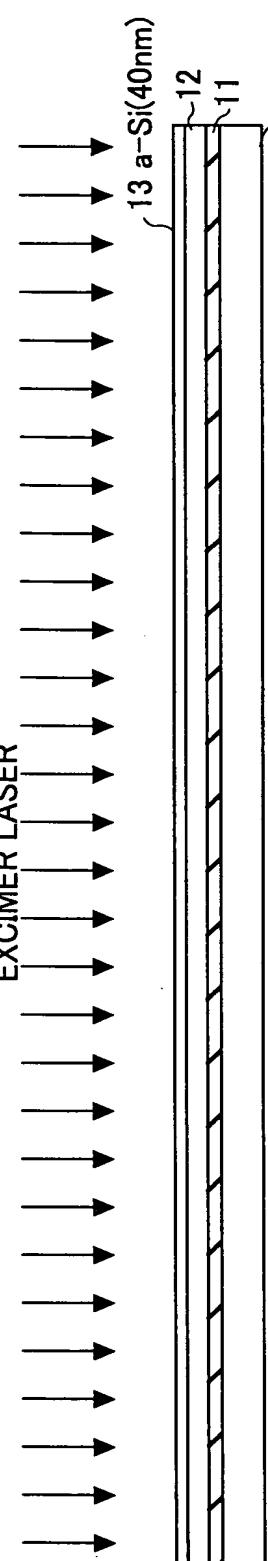


FIG. 4A

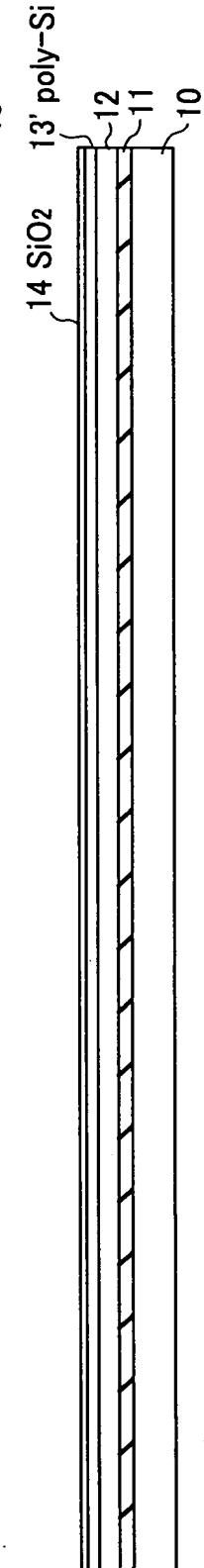


FIG. 4B

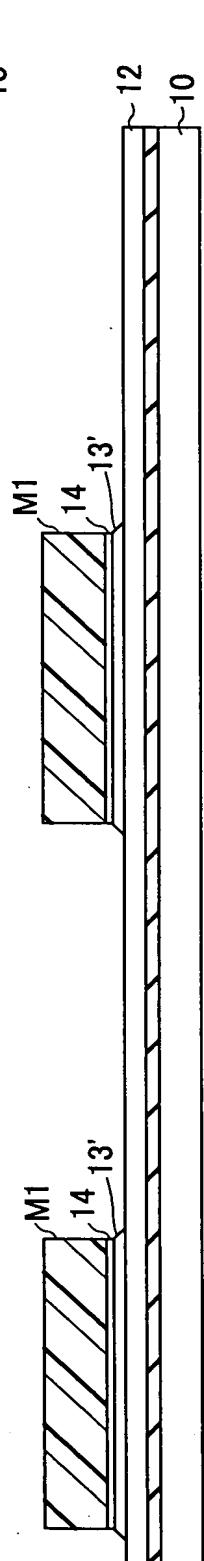


FIG. 4C

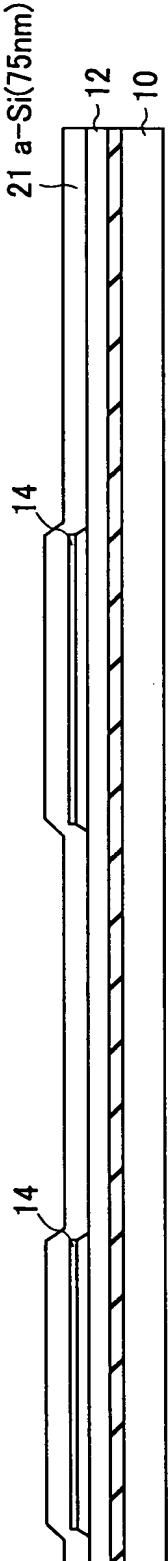


FIG. 4D

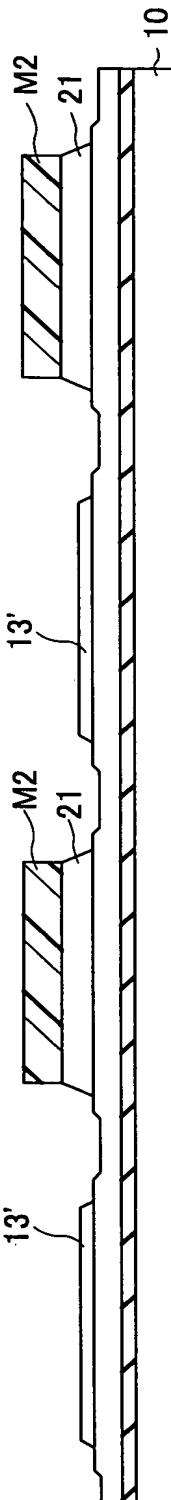


FIG. 4E

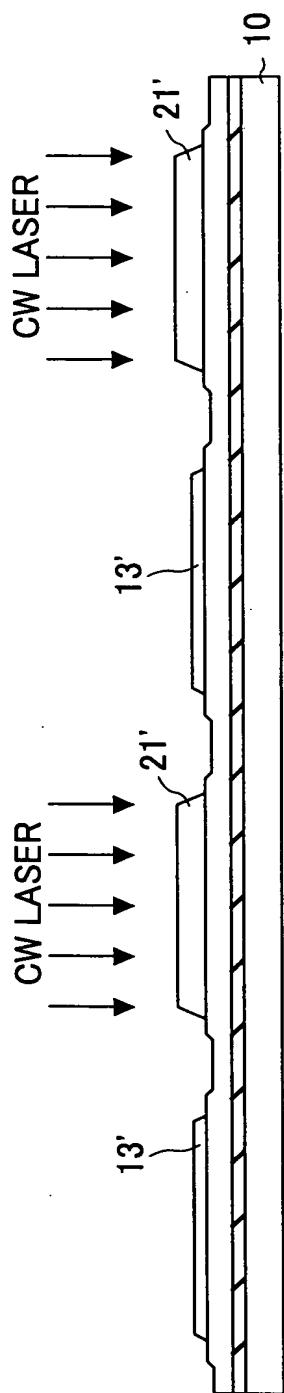
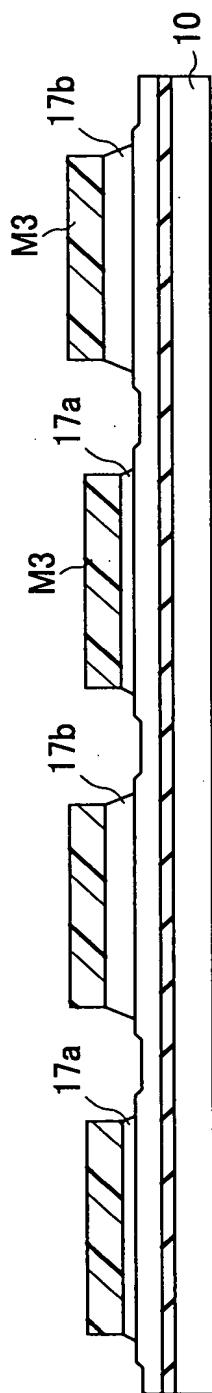


FIG.4F



ISOLATION

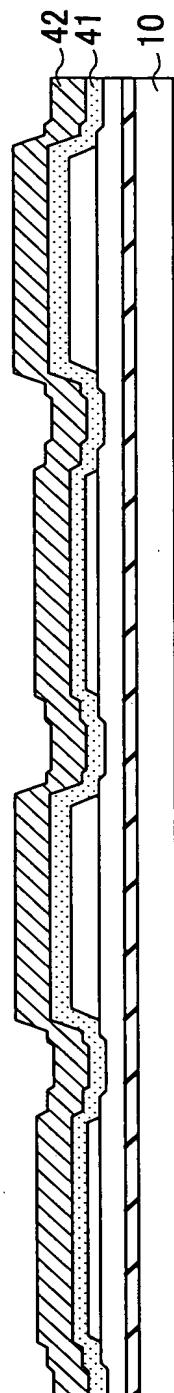


FIG.4H

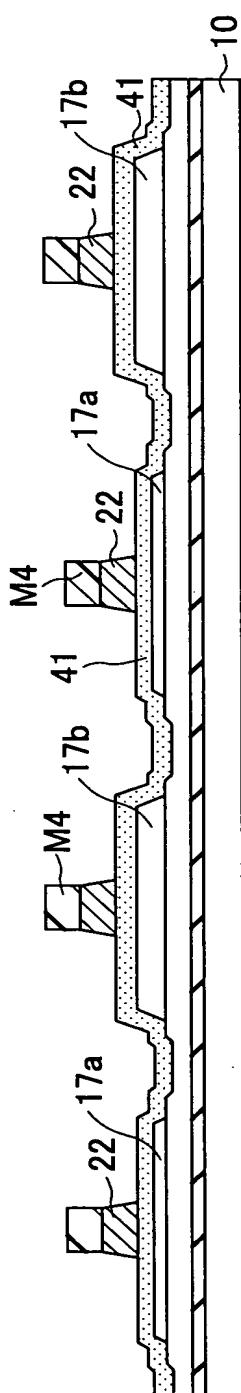


FIG.4I

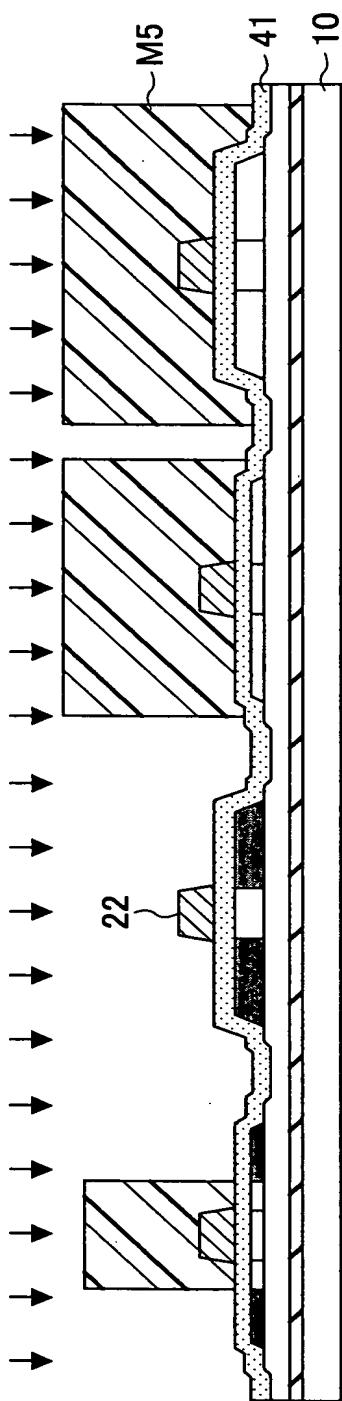


FIG.4J

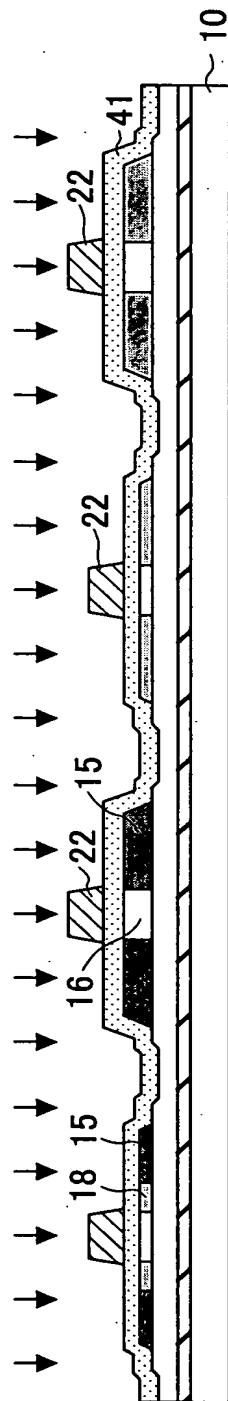


FIG.4K

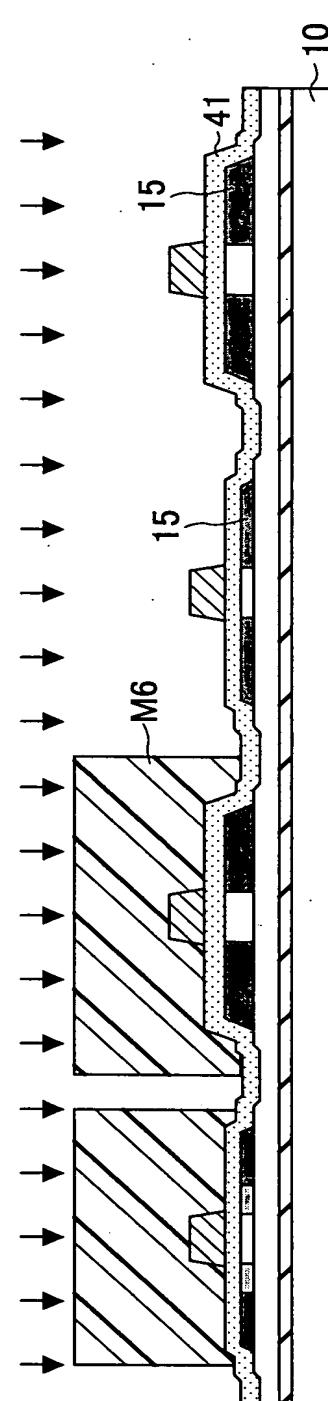


FIG.4L

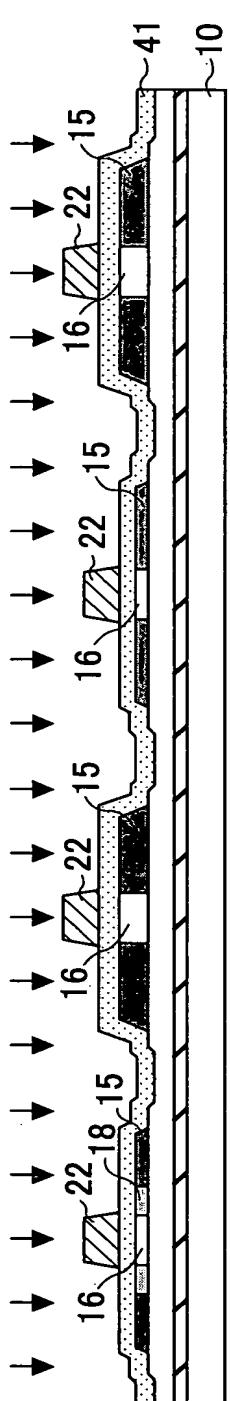


FIG.4M

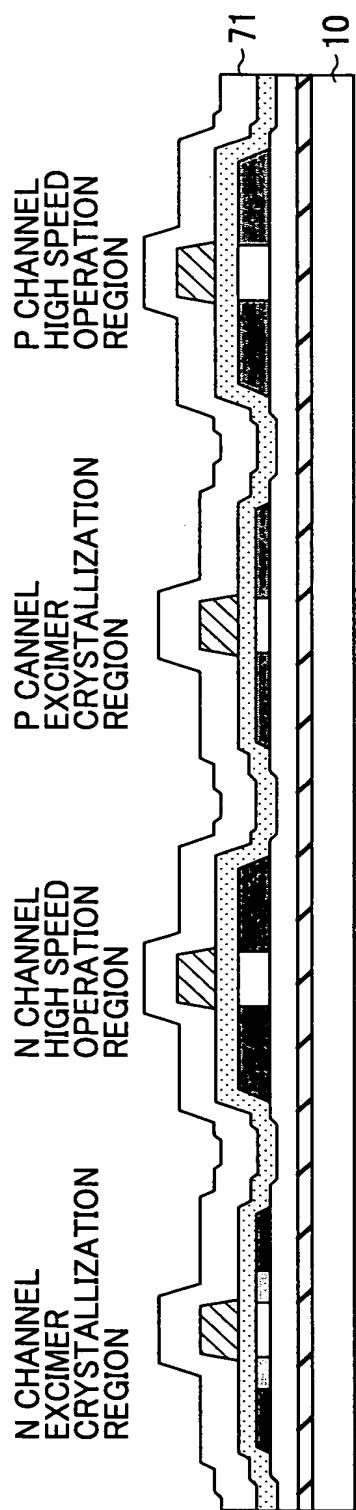


FIG.4N

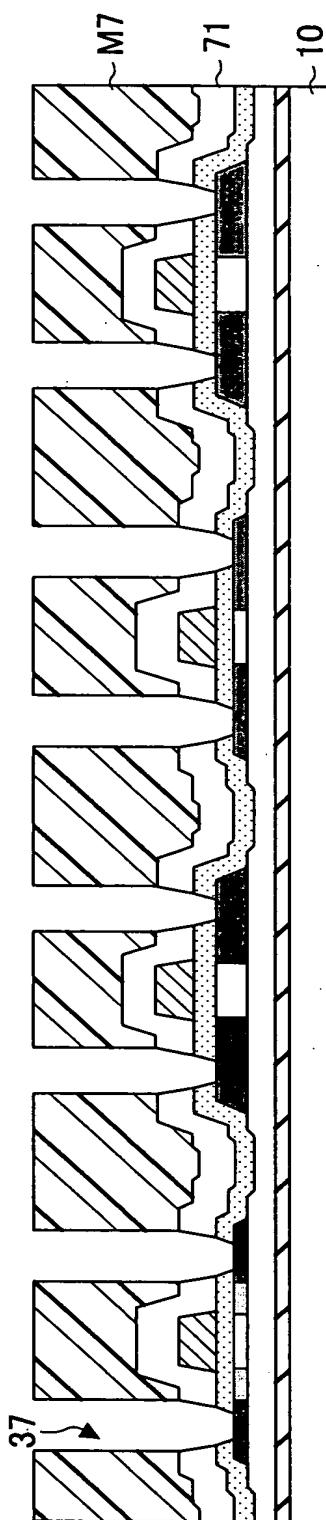


FIG.4O

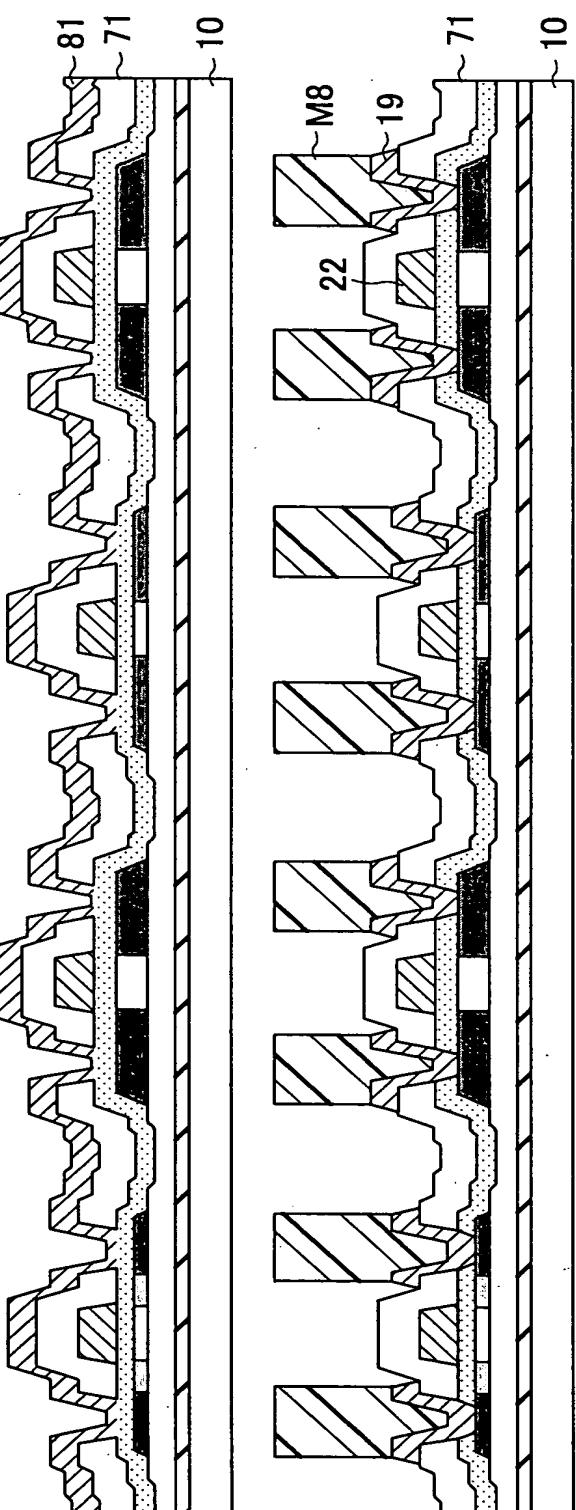


FIG.4P

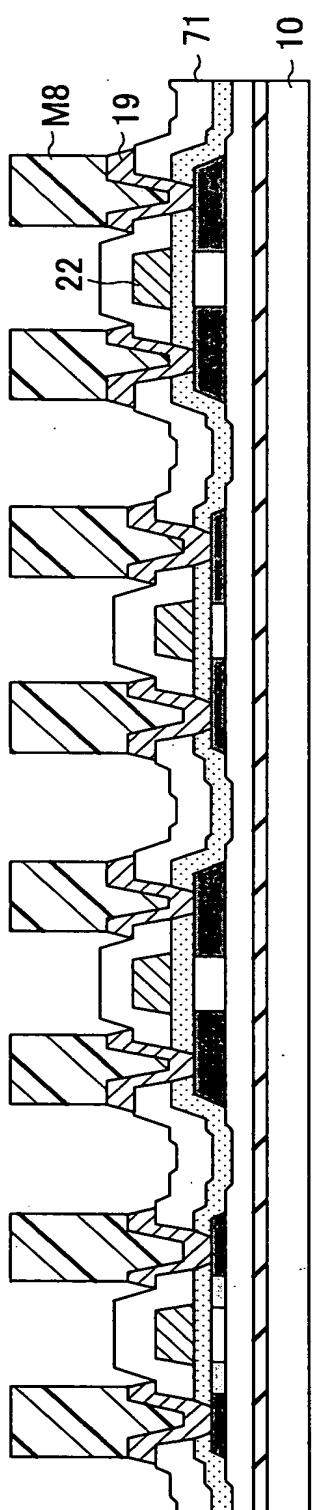


FIG.4Q

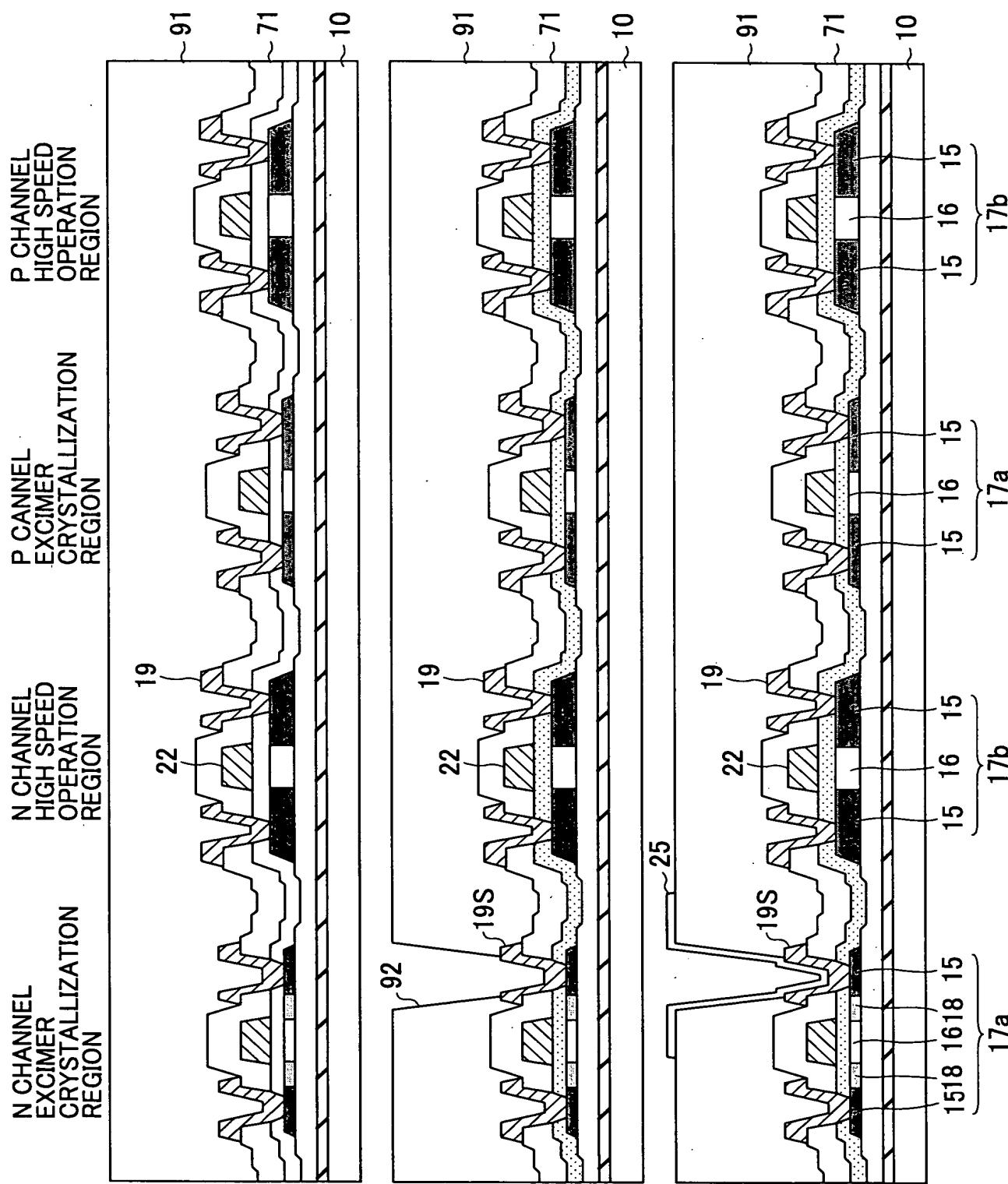


FIG.4R

FIG.4S

FIG.4T

N CHANNEL EXCIMER CRYSTALLIZATION REGION
P CHANNEL HIGH SPEED OPERATION REGION
P CHANNEL EXCIMER CRYSTALLIZATION REGION

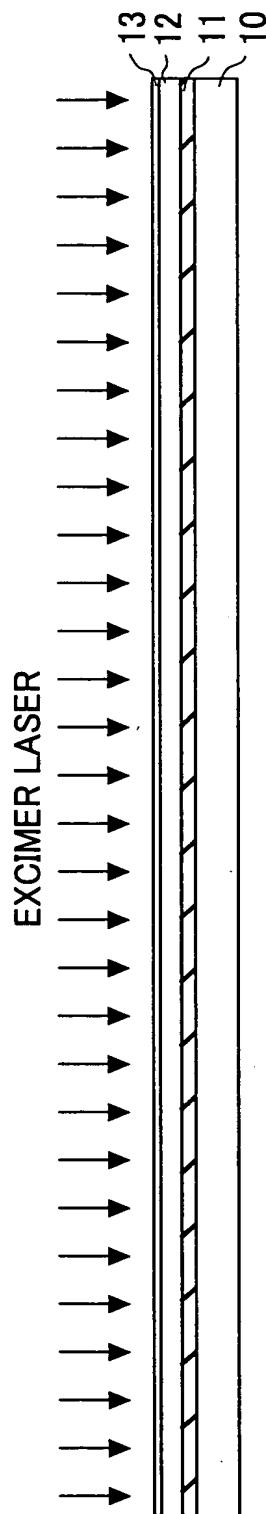


FIG.5A

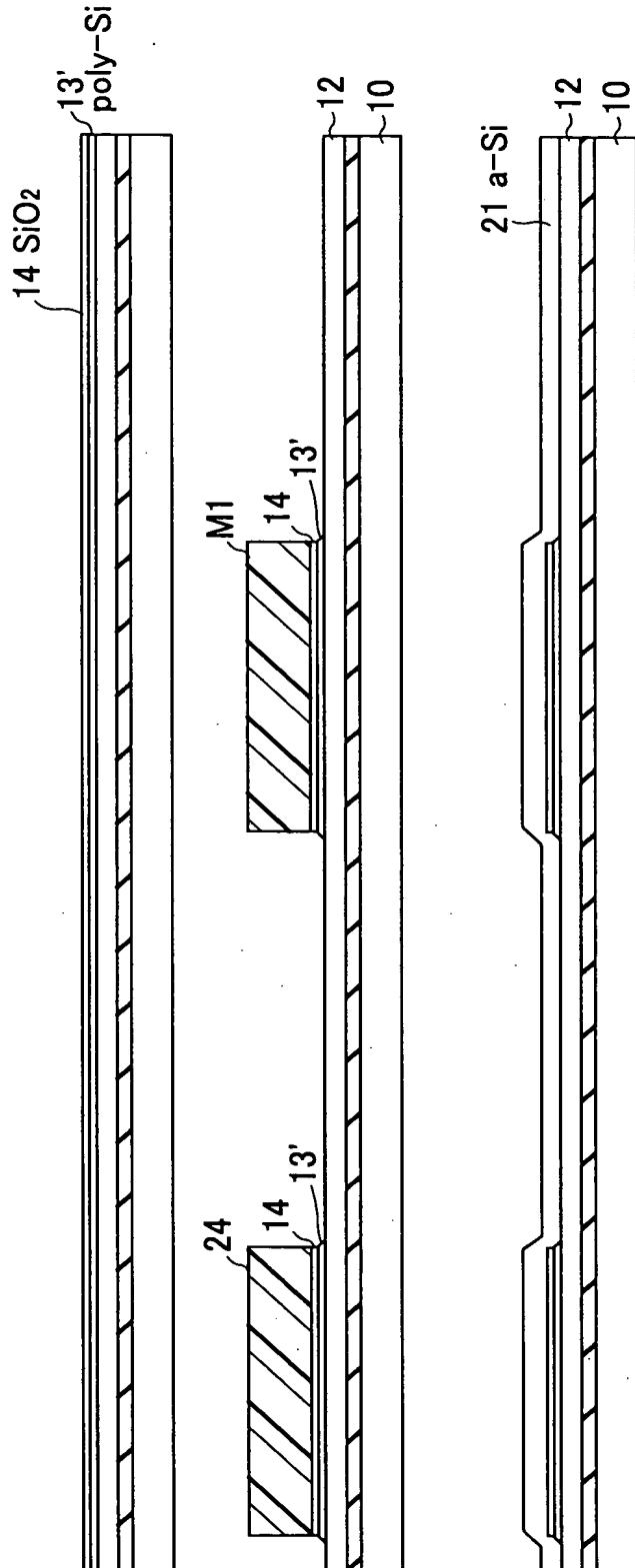


FIG.5B

FIG.5C

FIG.5D

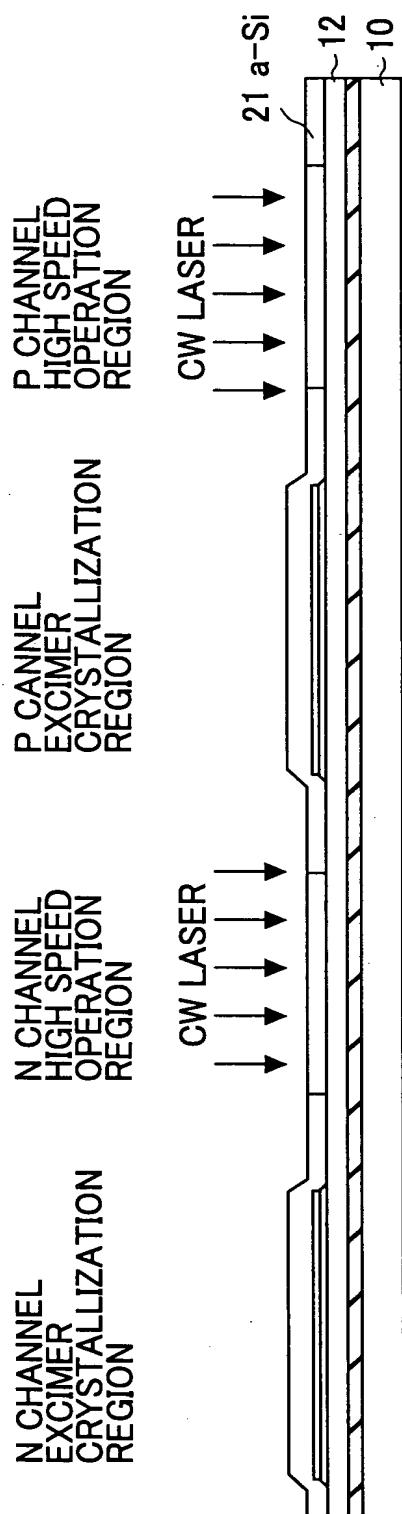


FIG.5E

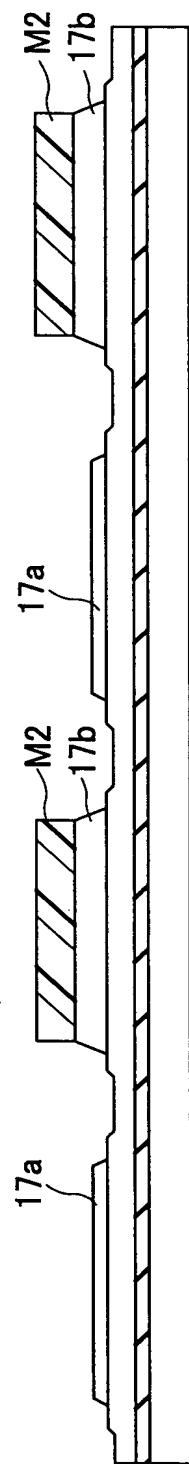


FIG.5F

N CHANNEL EXCIMER CRYSTALLIZATION REGION
P CHANNEL EXCIMER CRYSTALLIZATION REGION
P CHANNEL HIGH SPEED OPERATION REGION

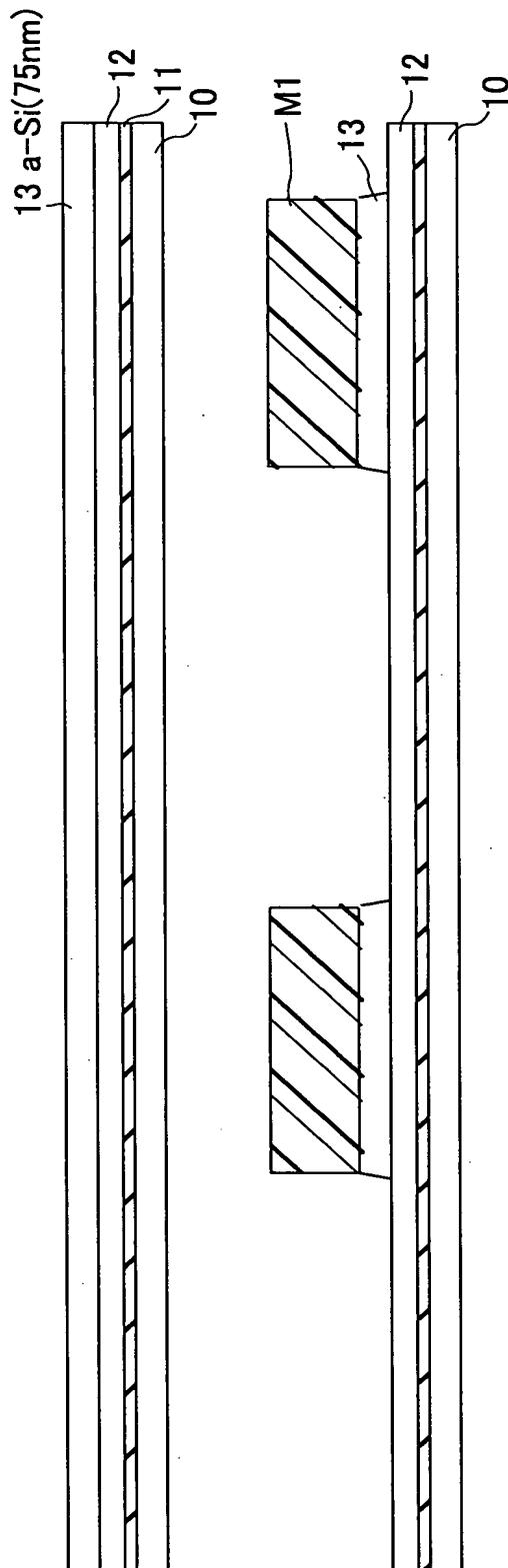


FIG.6A

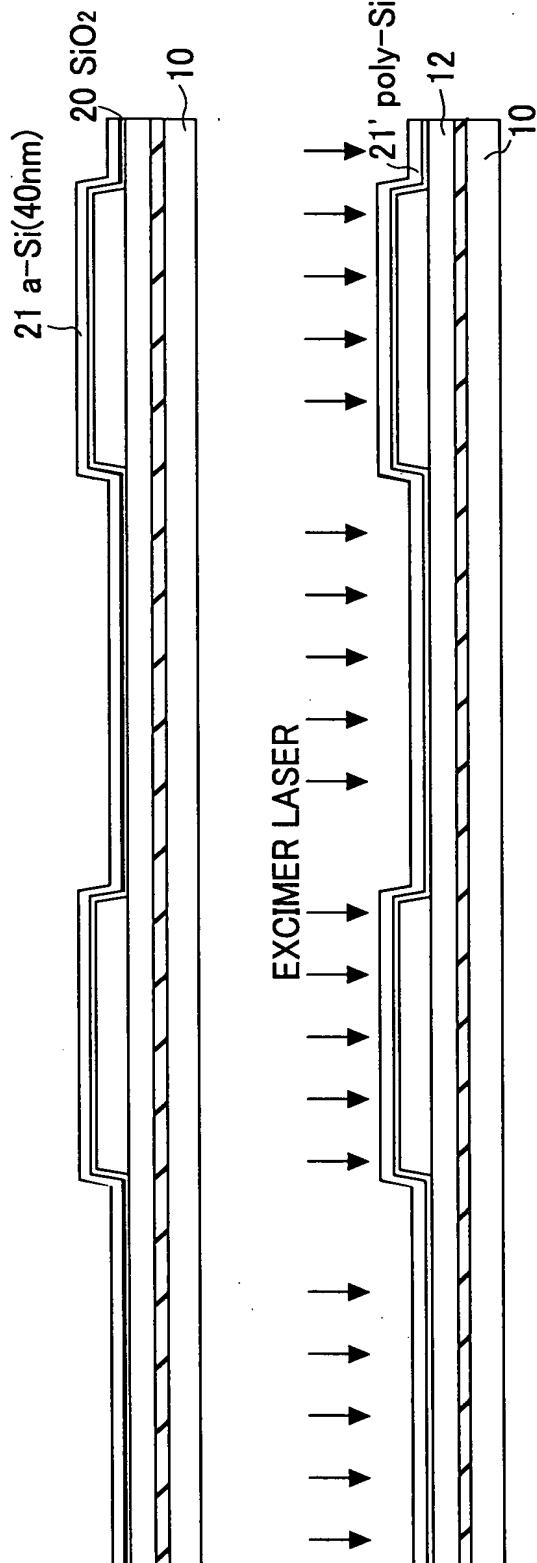


FIG.6B

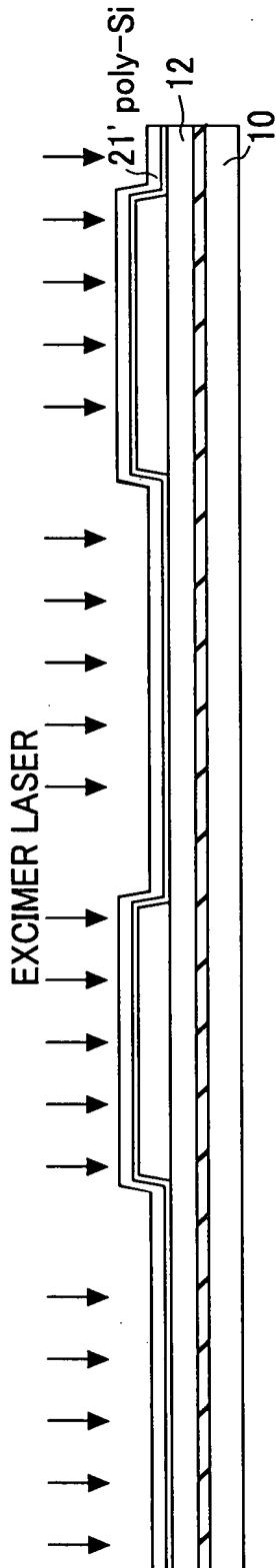


FIG.6C

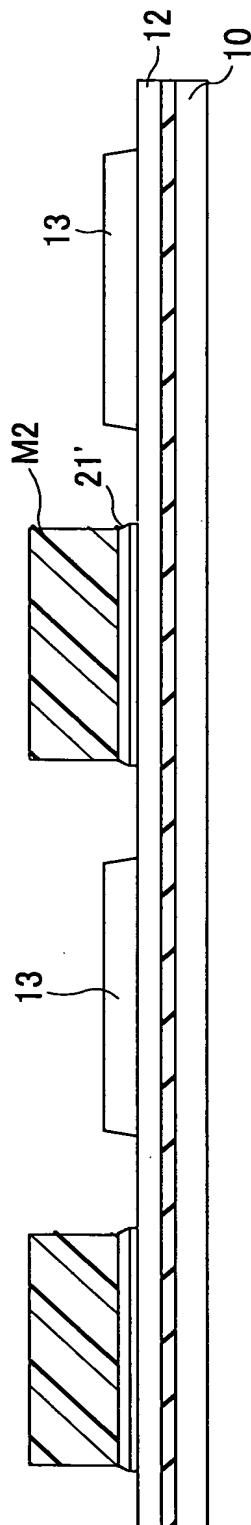


FIG.6E

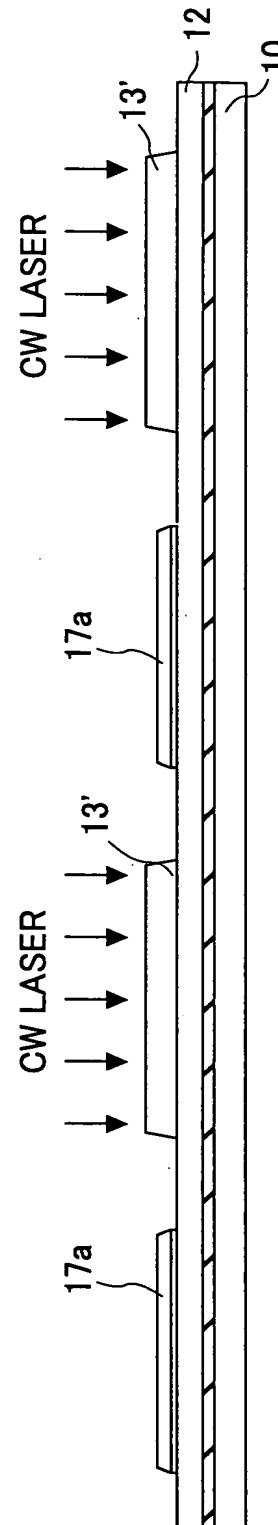


FIG.6F

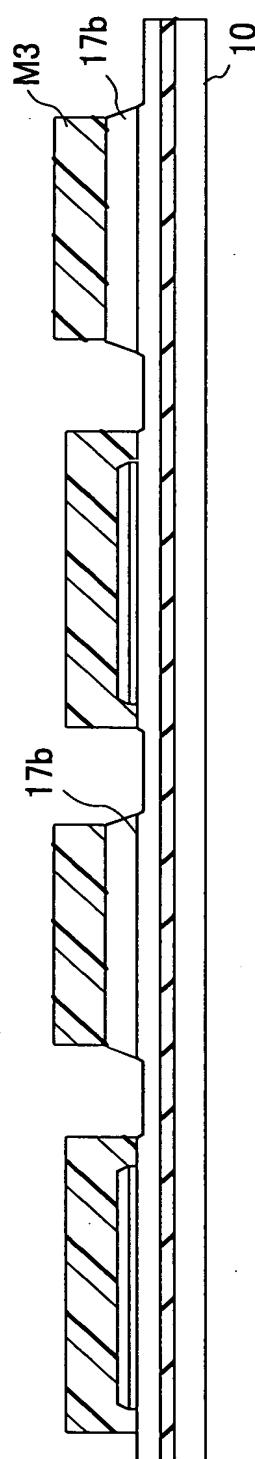


FIG.6G

N CHANNEL EXCIMER CRYSTALLIZATION REGION
P CHANNEL EXCIMER CRYSTALLIZATION REGION
P CHANNEL HIGH SPEED OPERATION REGION

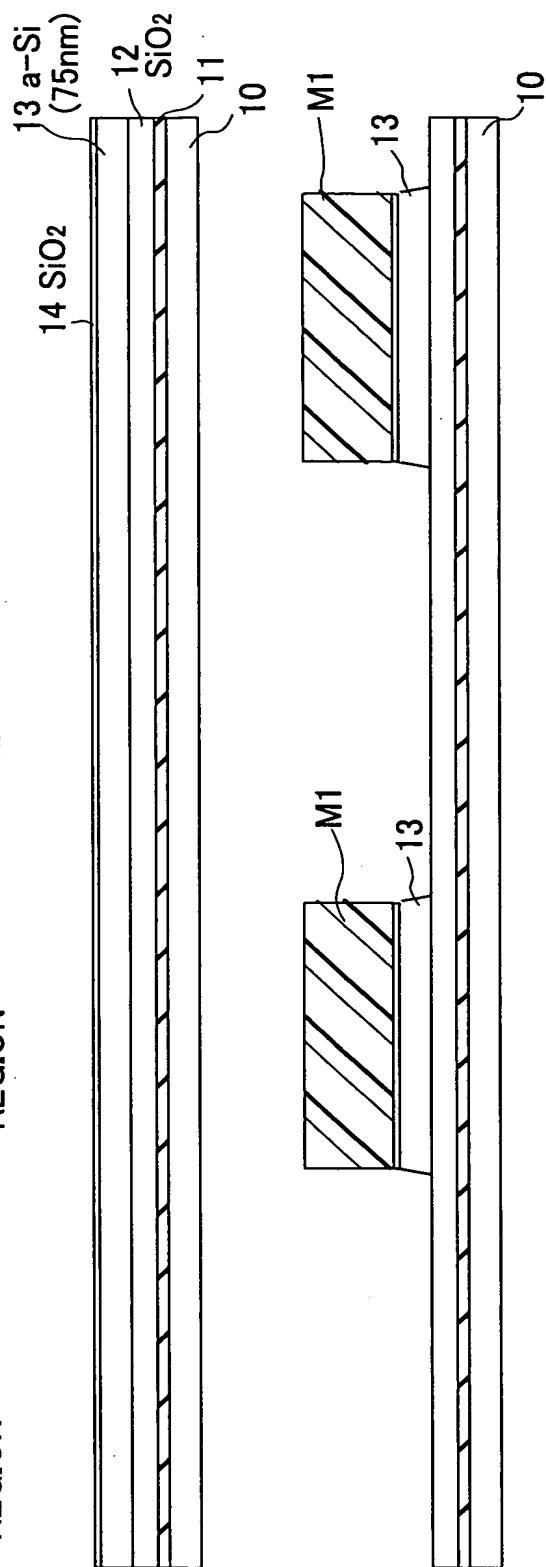


FIG.7A

FIG.7B

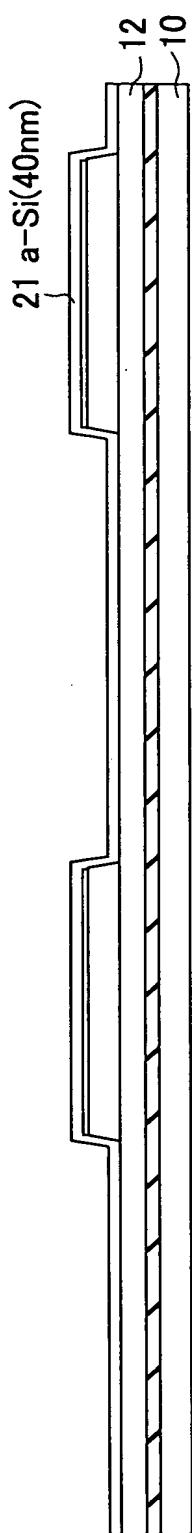


FIG.7C

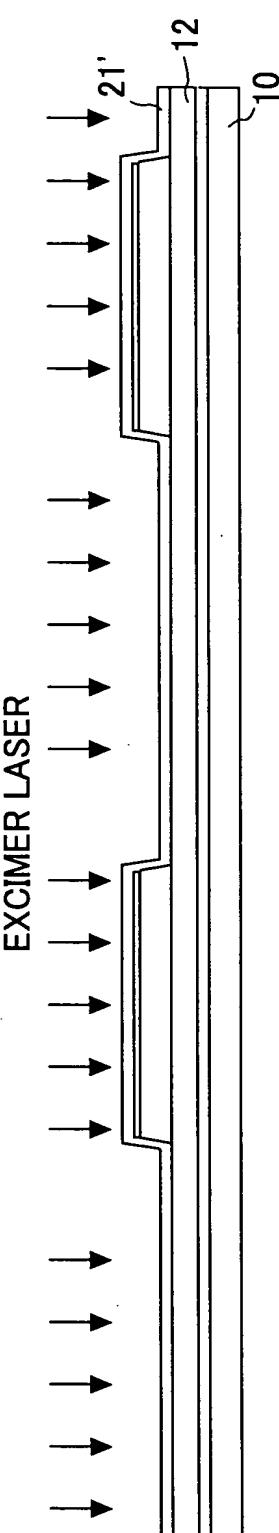


FIG.7D

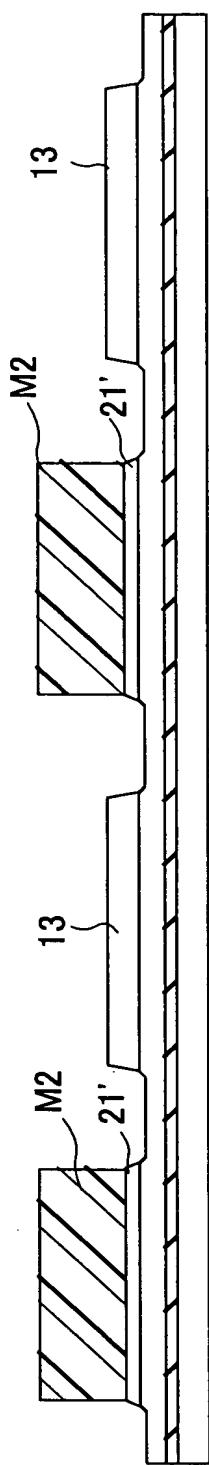


FIG.7E

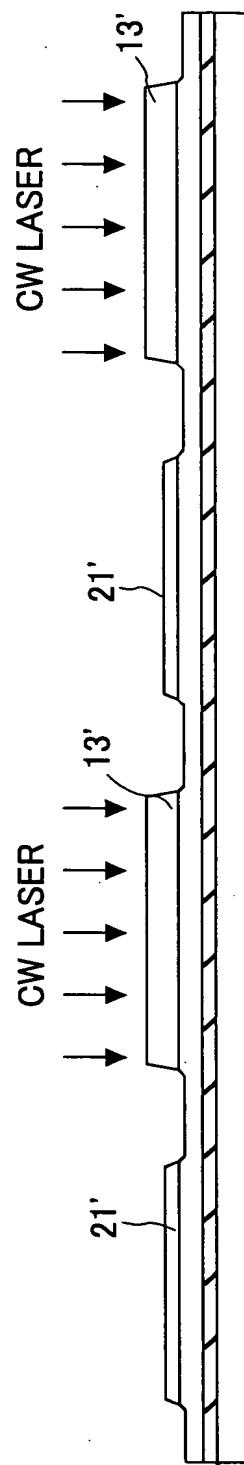


FIG.7F

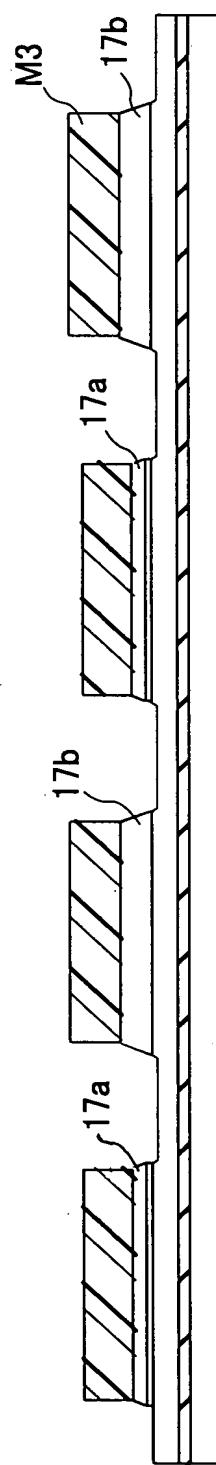


FIG.7G

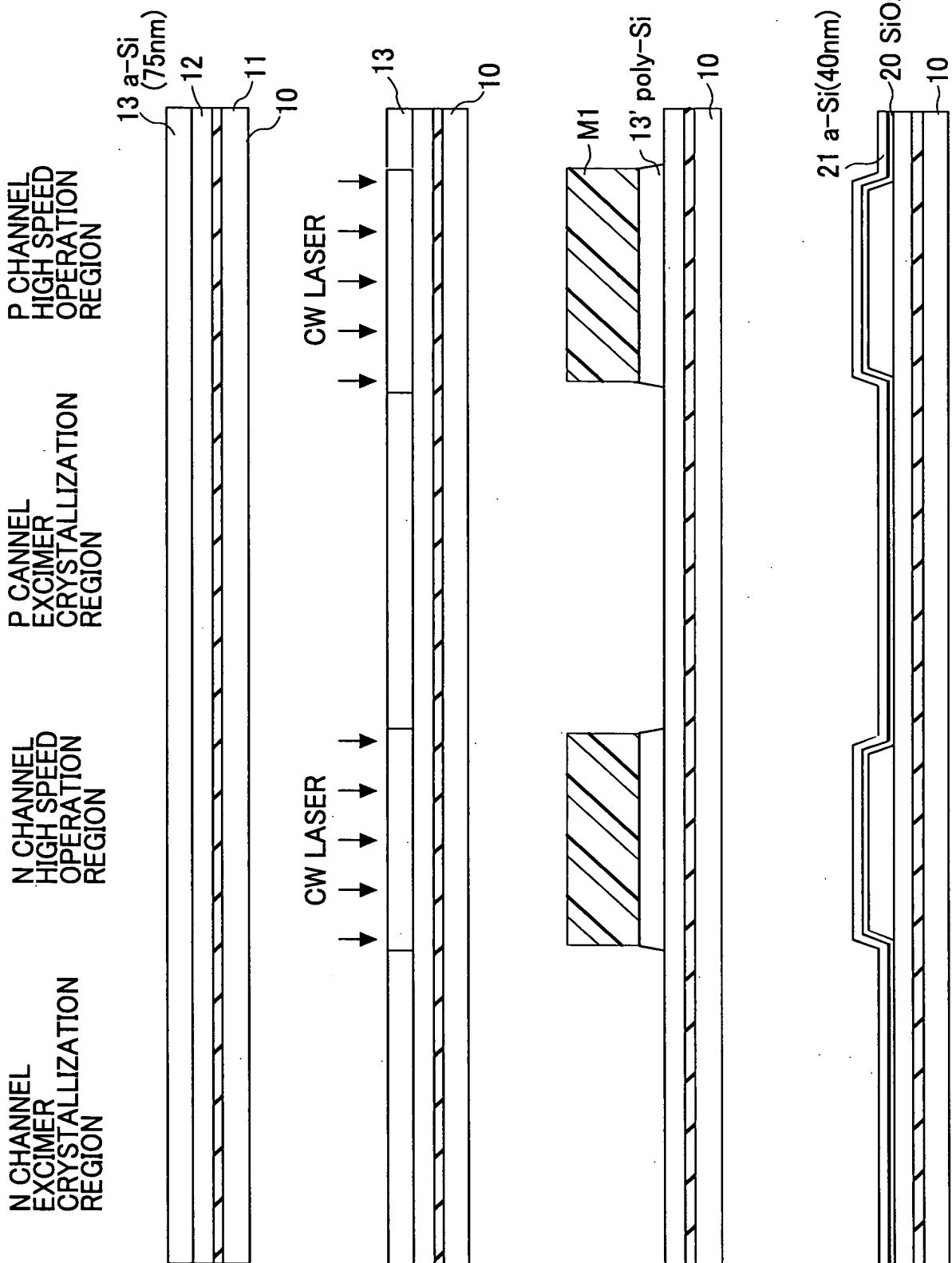


FIG.8A

FIG.8B

FIG.8C

FIG.8D

N CHANNEL EXCIMER CRYSTALLIZATION REGION
P CHANNEL HIGH SPEED OPERATION REGION
P CHANNEL EXCIMER CRYSTALLIZATION REGION

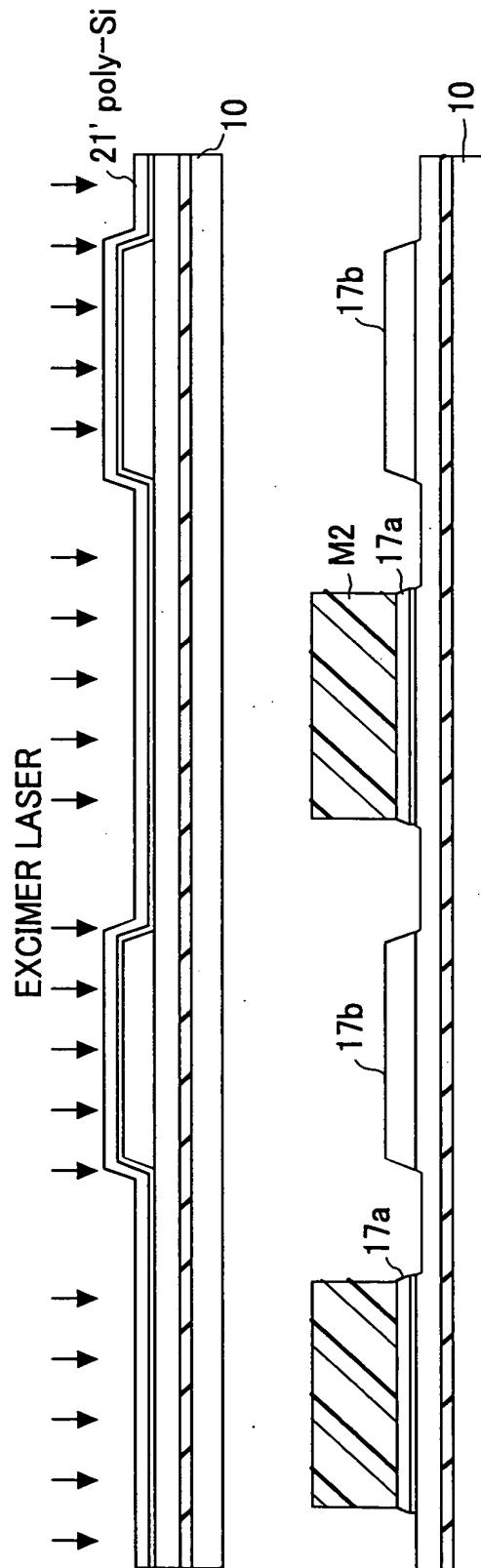


FIG.8E

FIG.8F

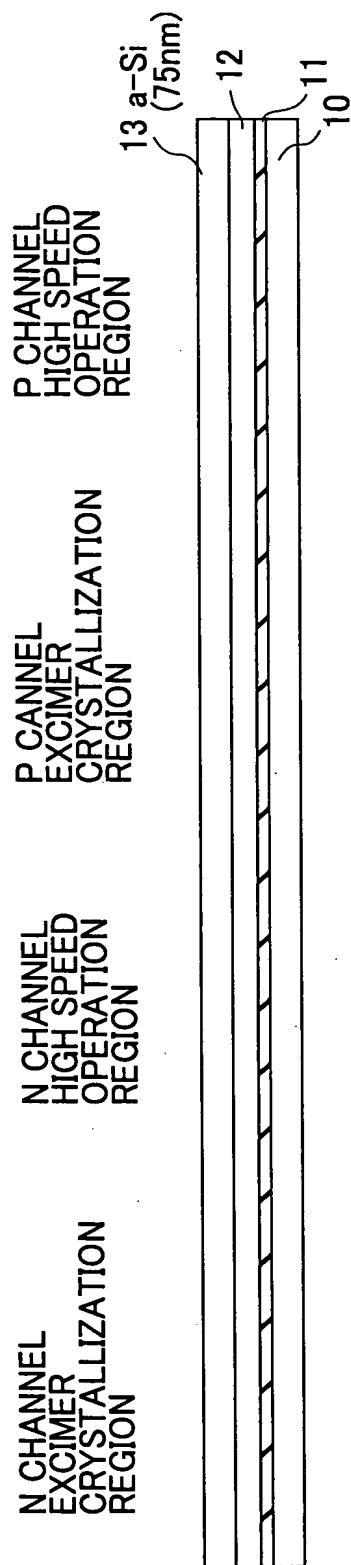


FIG.9A

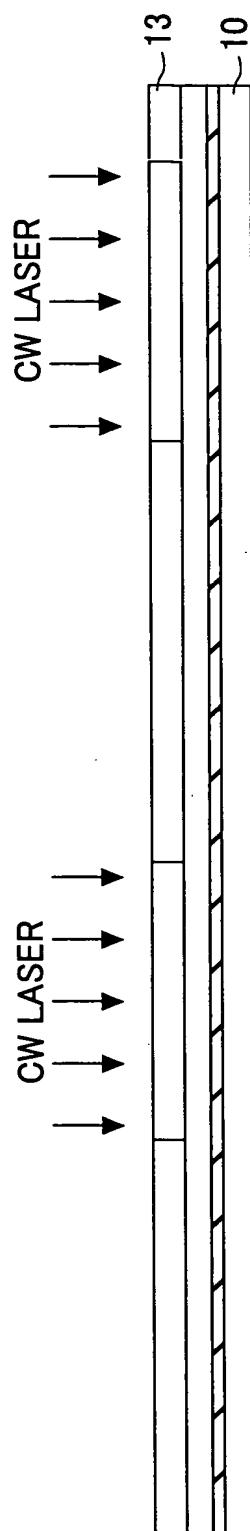


FIG.9B

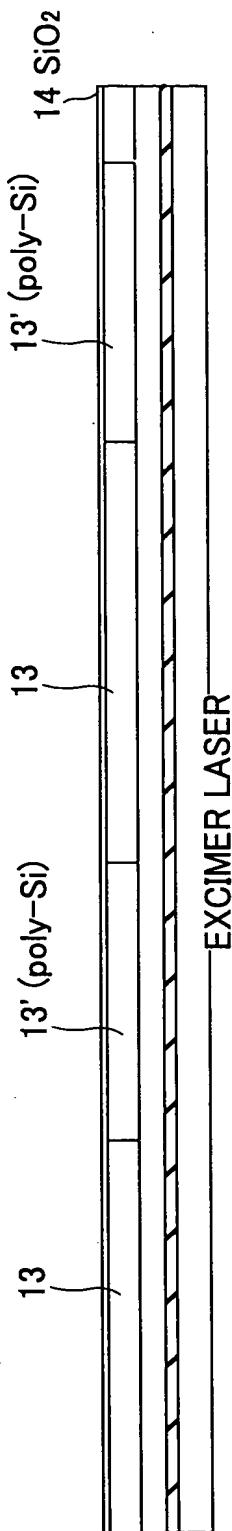


FIG.9C

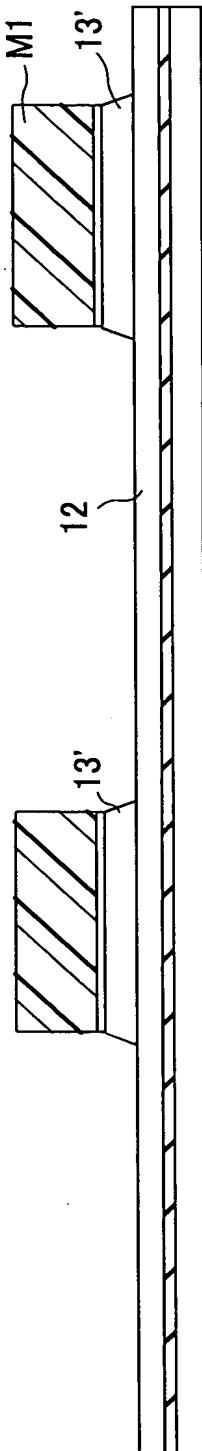


FIG.9D

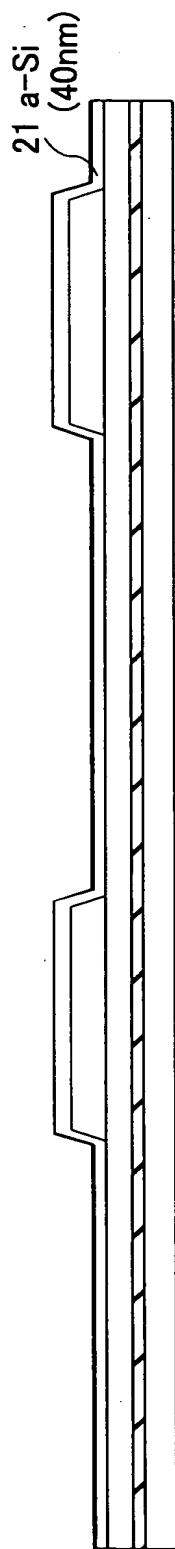


FIG.9E

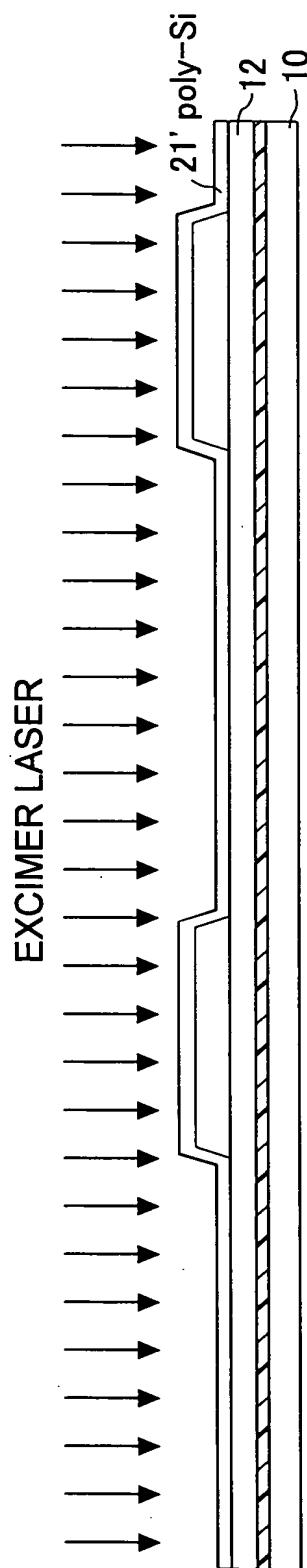


FIG.9F

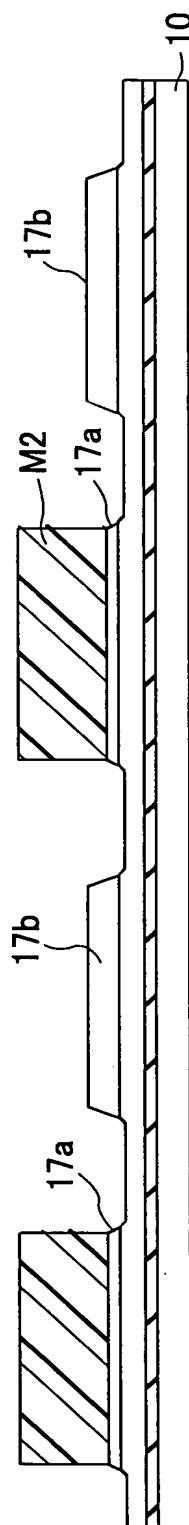


FIG.9G

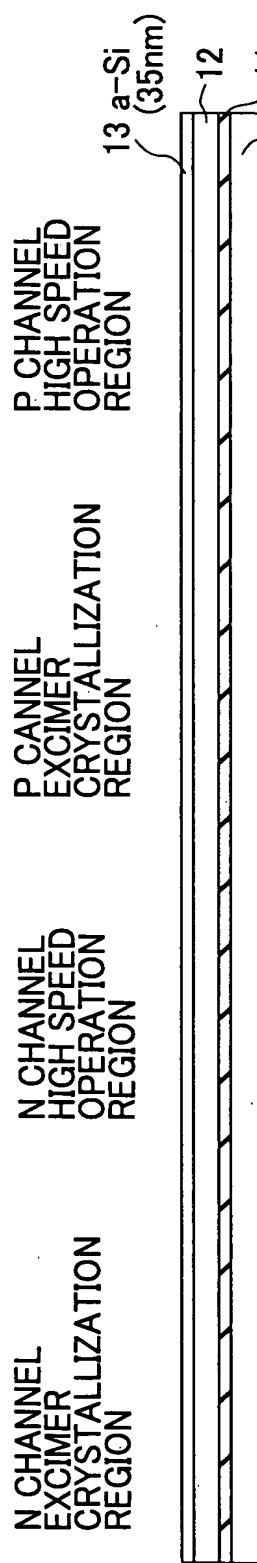


FIG.10A

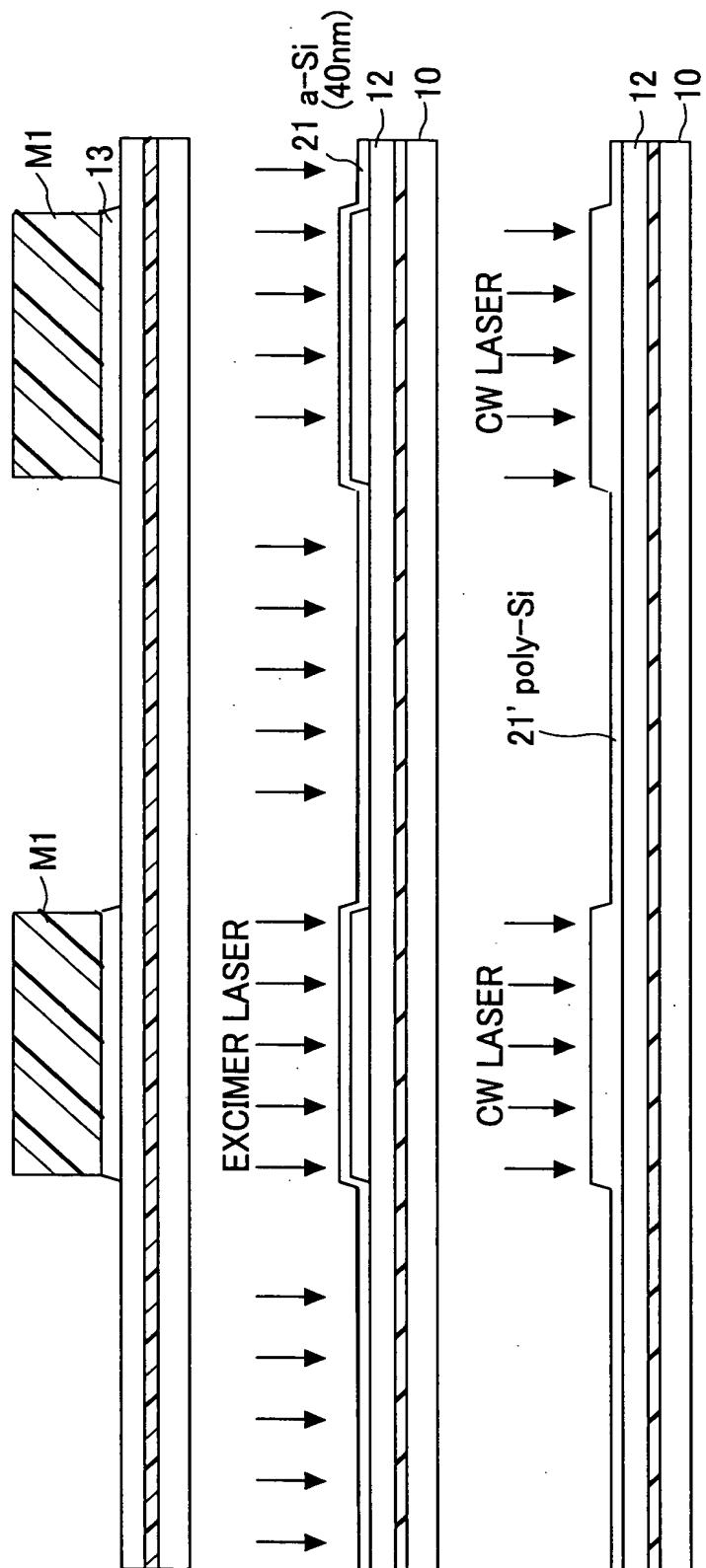


FIG.10B

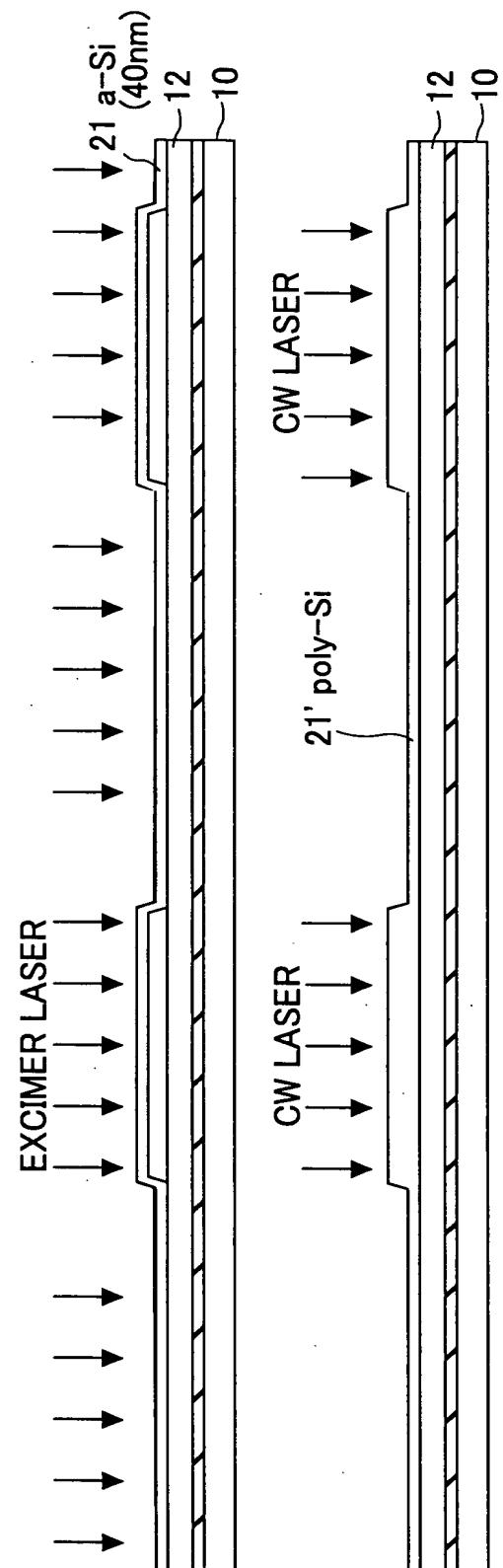


FIG.10C

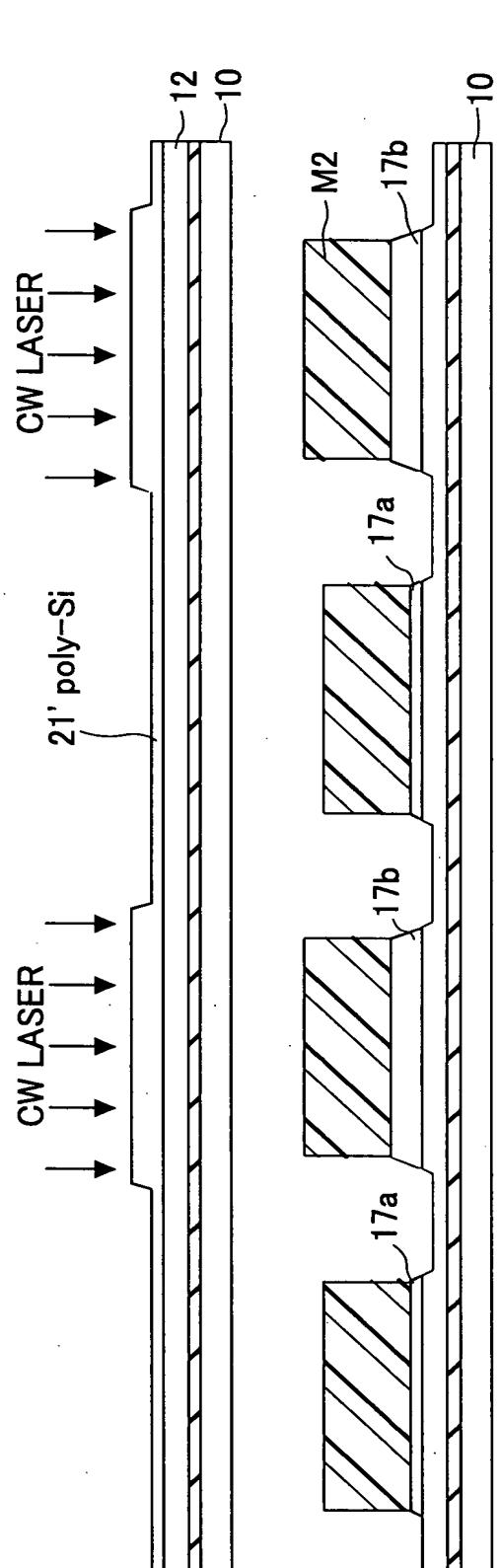


FIG.10D

FIG.10E

N CHANNEL EXCIMER CRYSTALLIZATION REGION
P CHANNEL EXCIMER CRYSTALLIZATION REGION
P CHANNEL HIGH SPEED OPERATION REGION

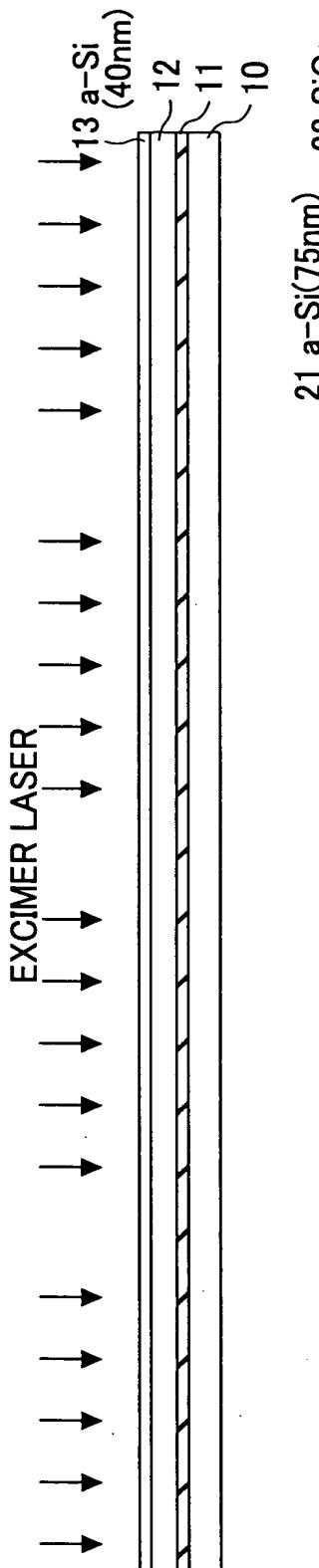


FIG.11A

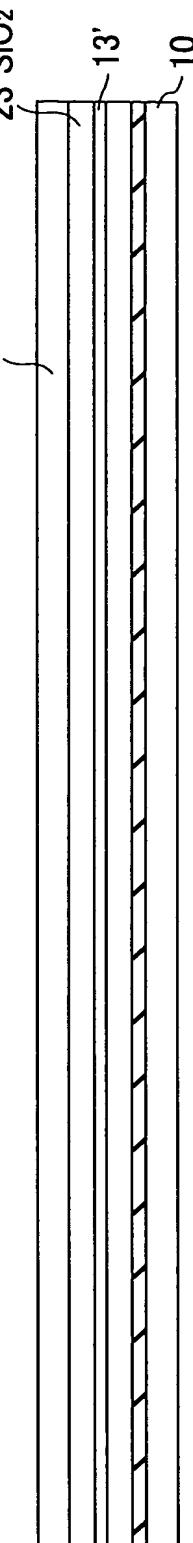


FIG.11B

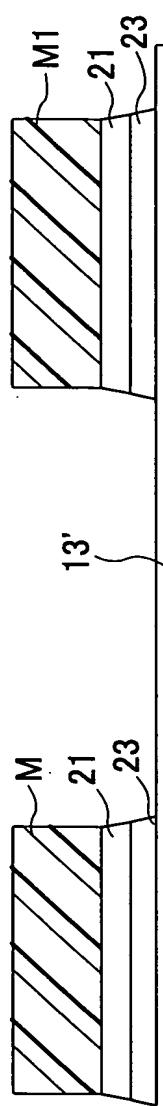


FIG.11C

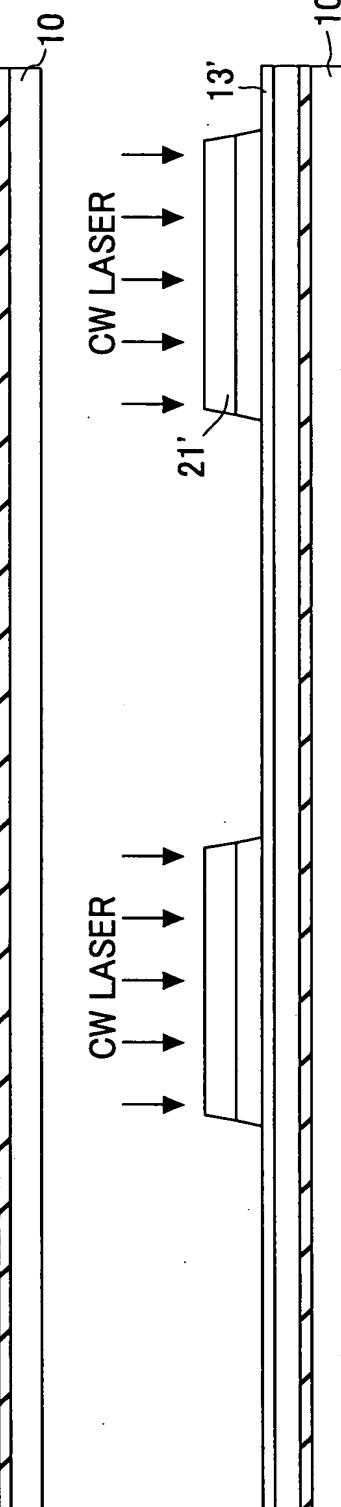


FIG.11D

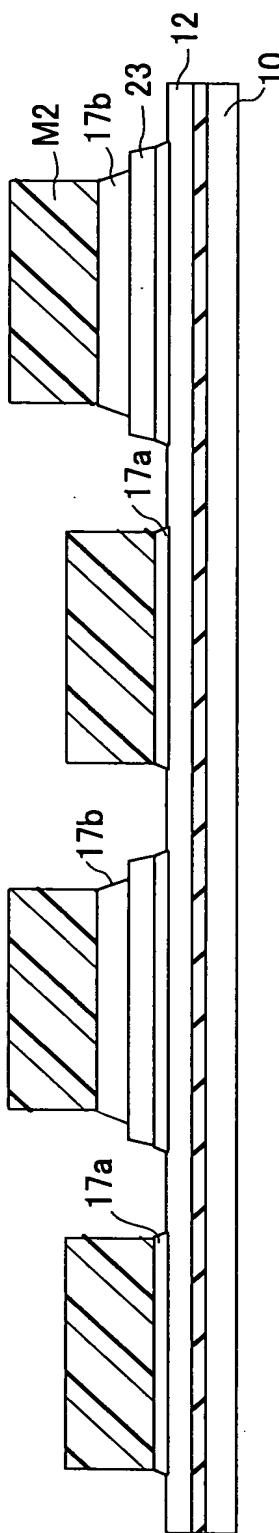


FIG. 11E

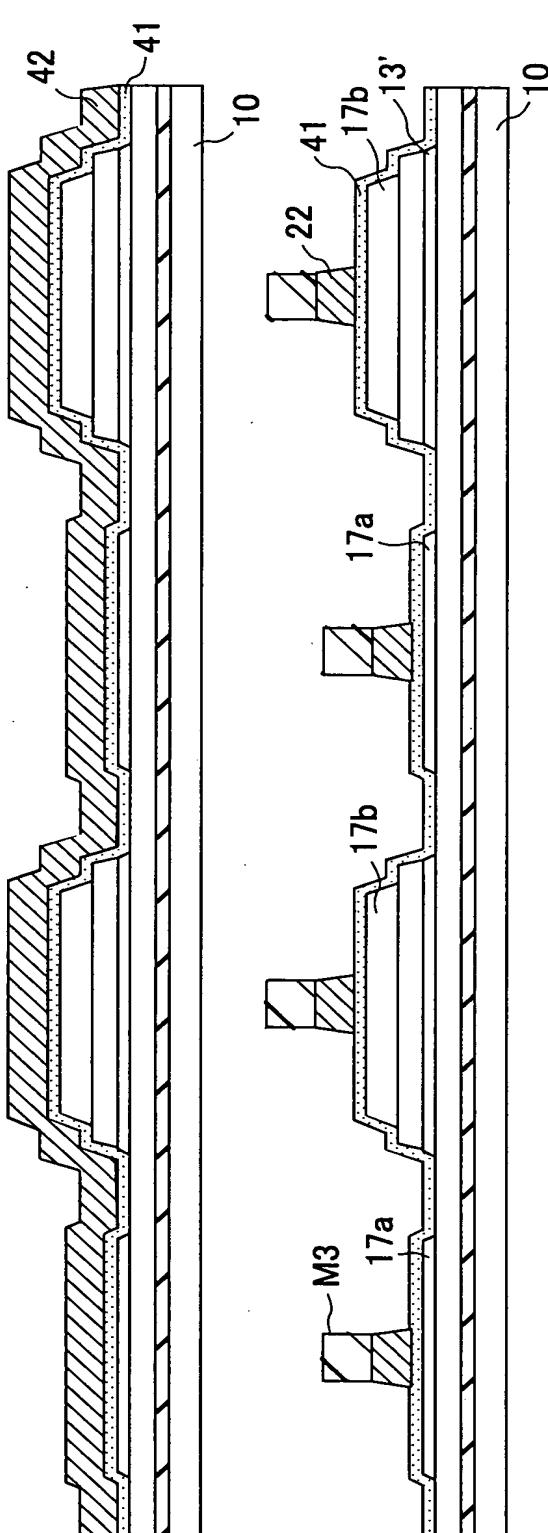


FIG. 11F

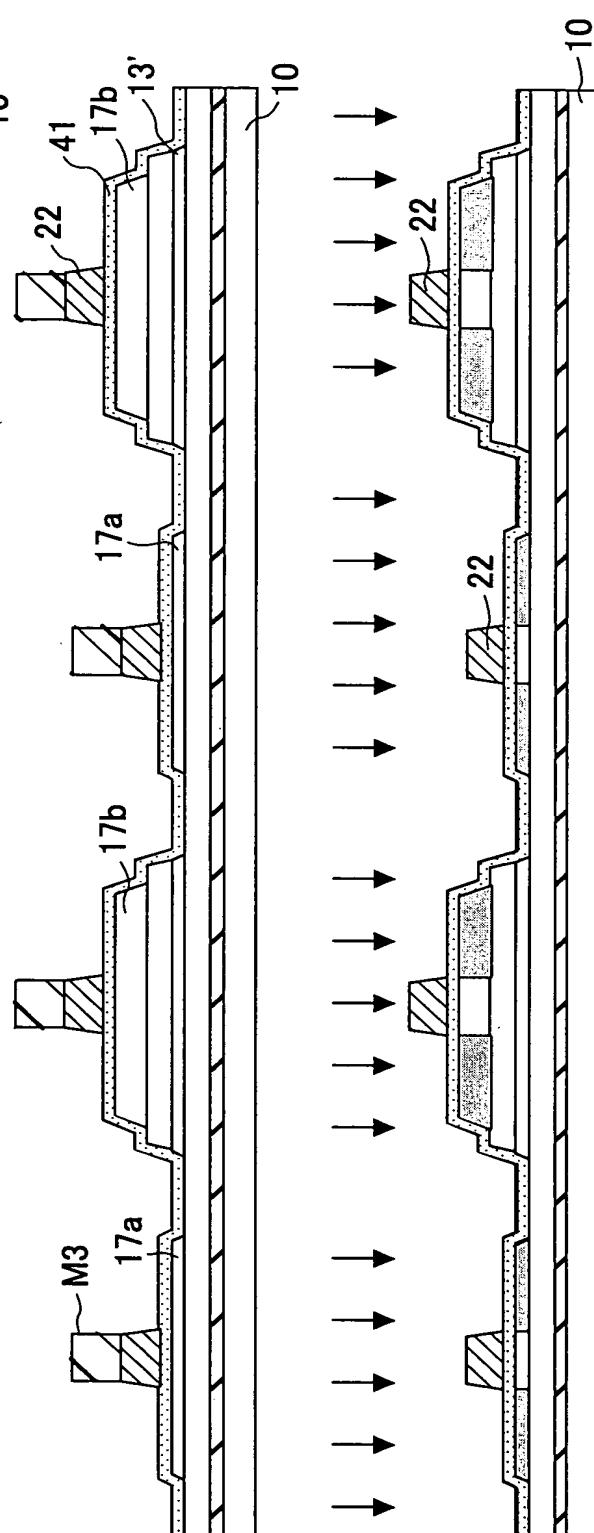


FIG. 11G

LOW CONCENTRATION P ION IMPLANTATION

FIG. 11H

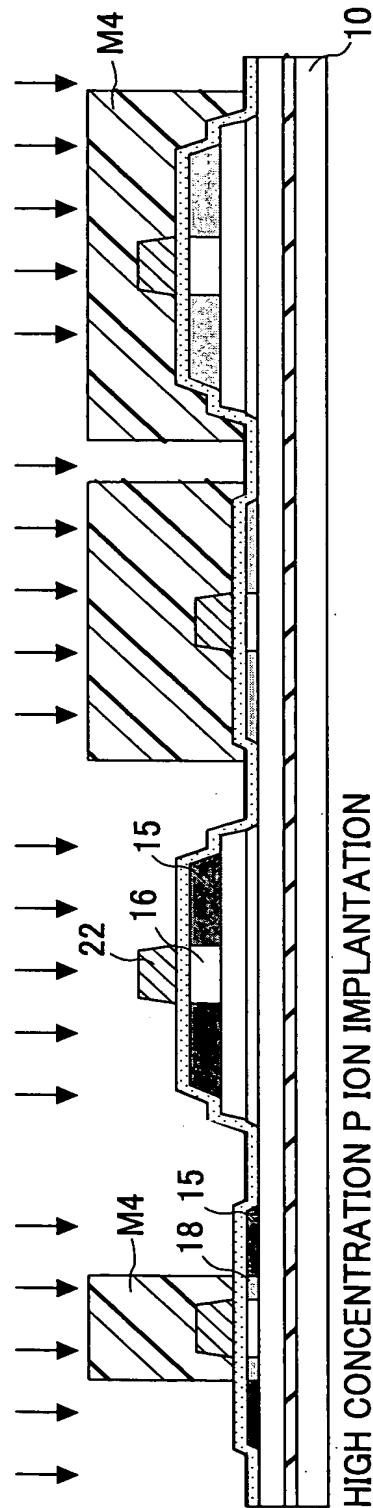


FIG.11I

HIGH CONCENTRATION P ION IMPLANTATION

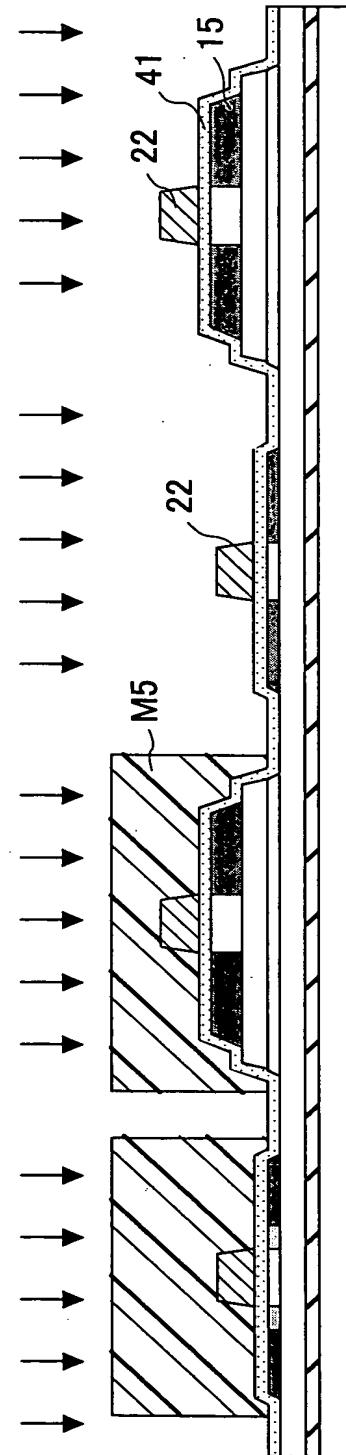


FIG.11J

HIGH CONCENTRATION B ION IMPLANTATION

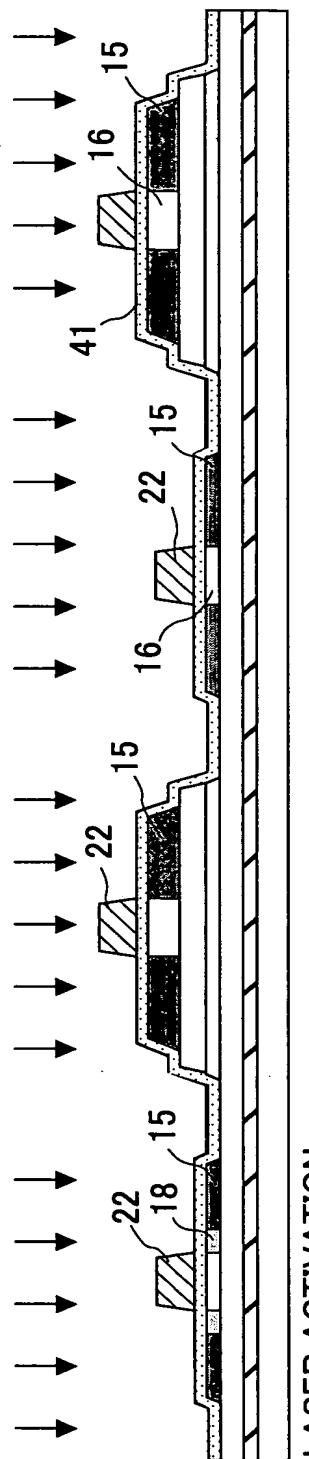


FIG.11K

LASER ACTIVATION

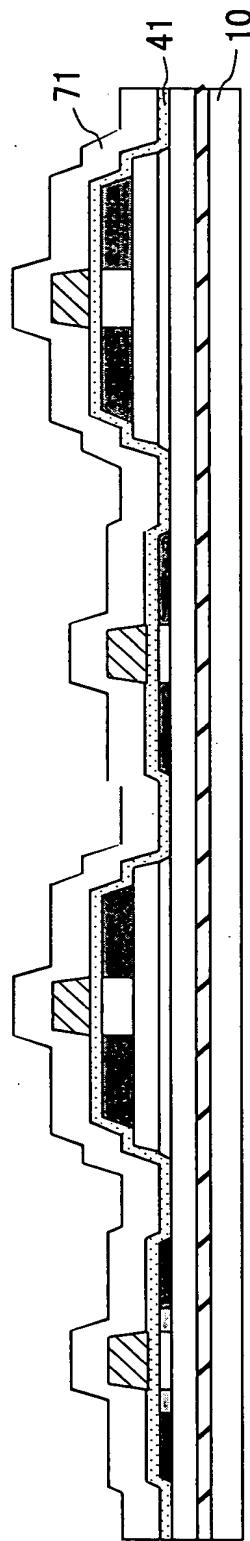


FIG.11L

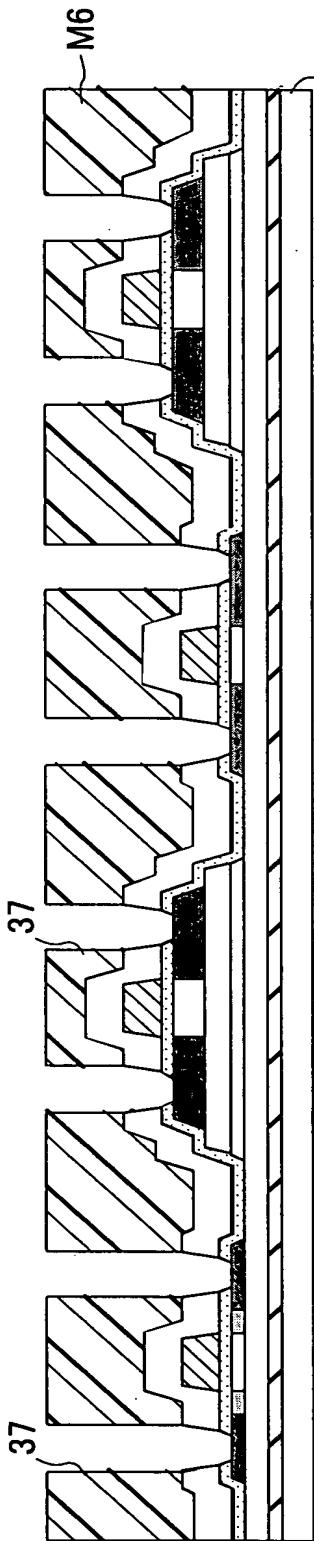


FIG.11M

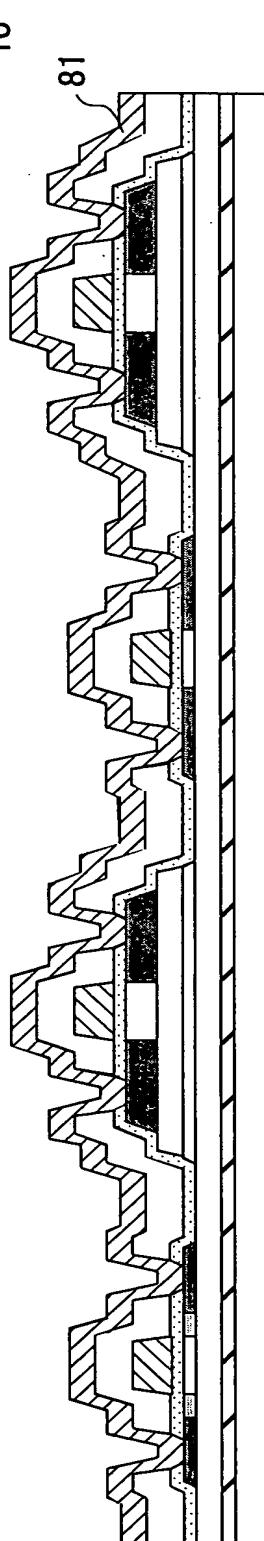


FIG.11N

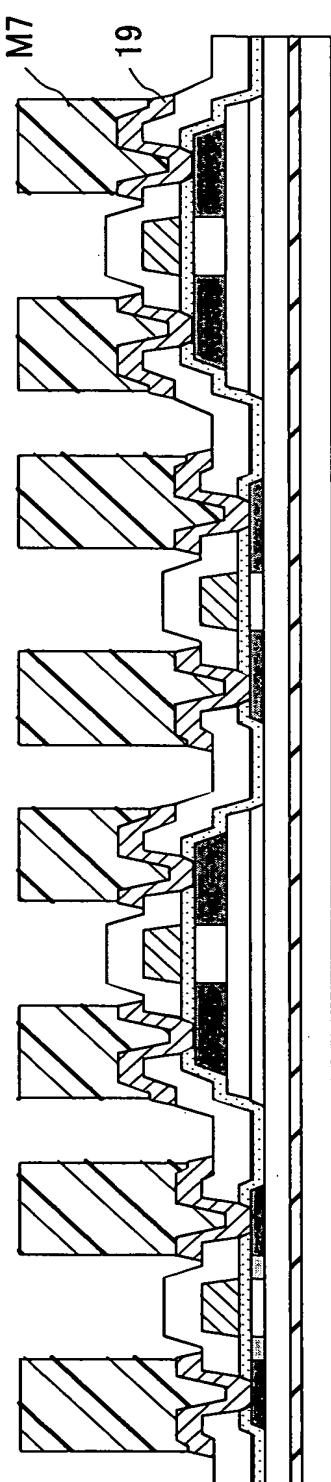


FIG.11O

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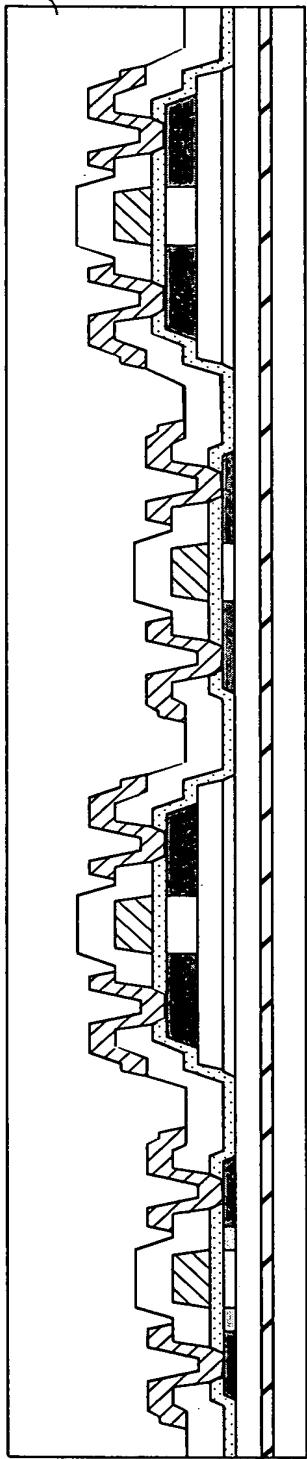


FIG.11P

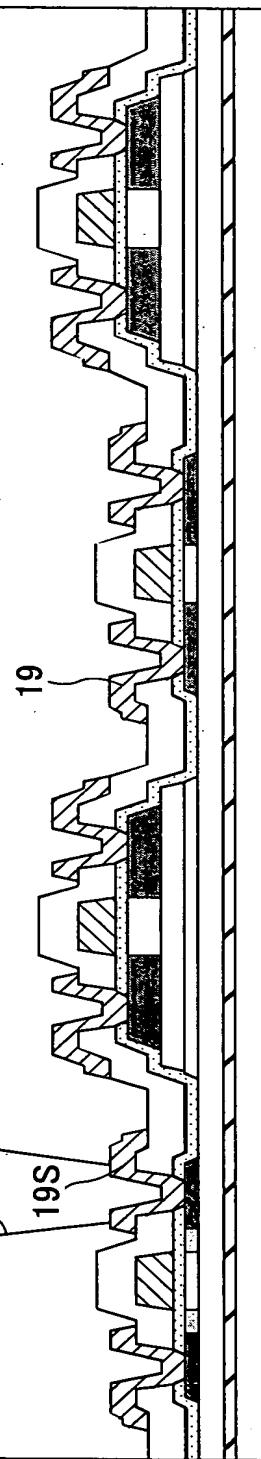


FIG.11Q

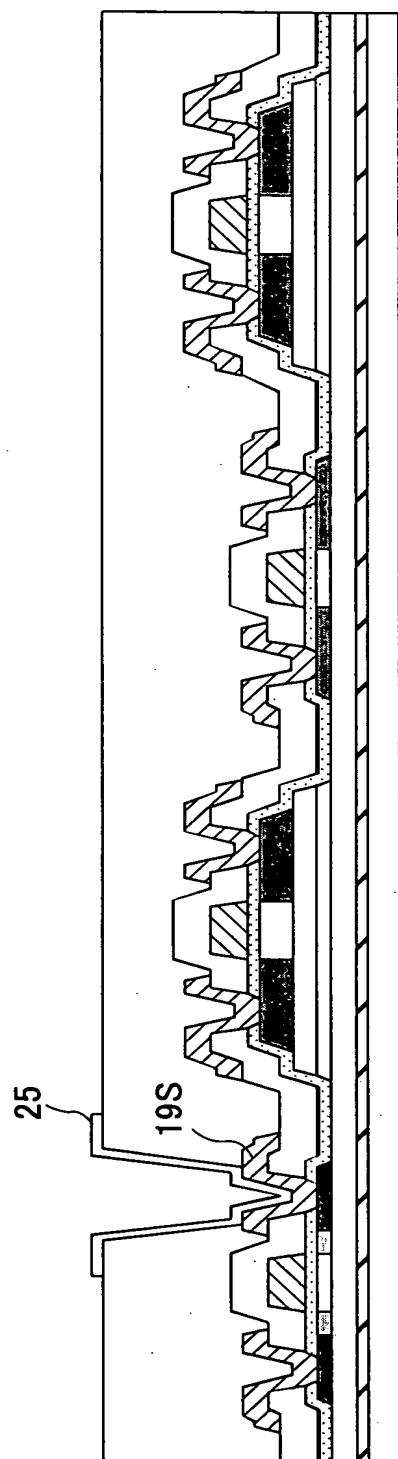


FIG.11R

N CHANNEL EXCIMER CRYSTALLIZATION REGION
 P CHANNEL EXCIMER CRYSTALLIZATION REGION
 P CHANNEL HIGH SPEED OPERATION REGION

FIG.12A

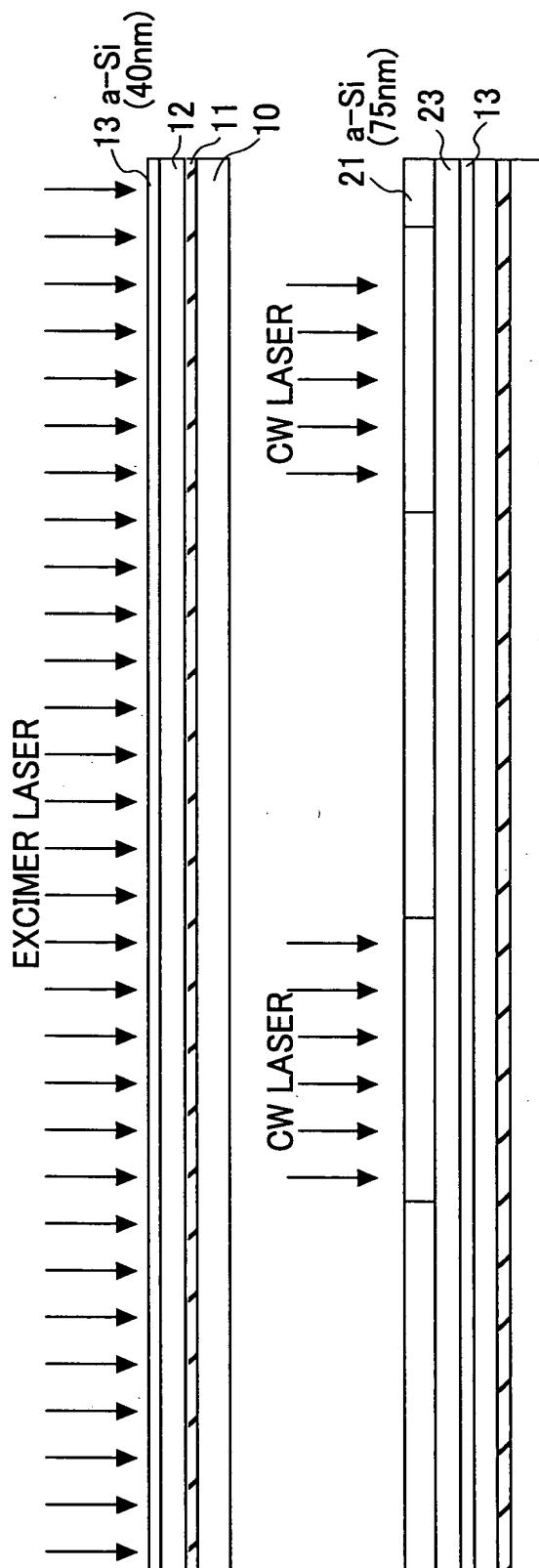


FIG.12B

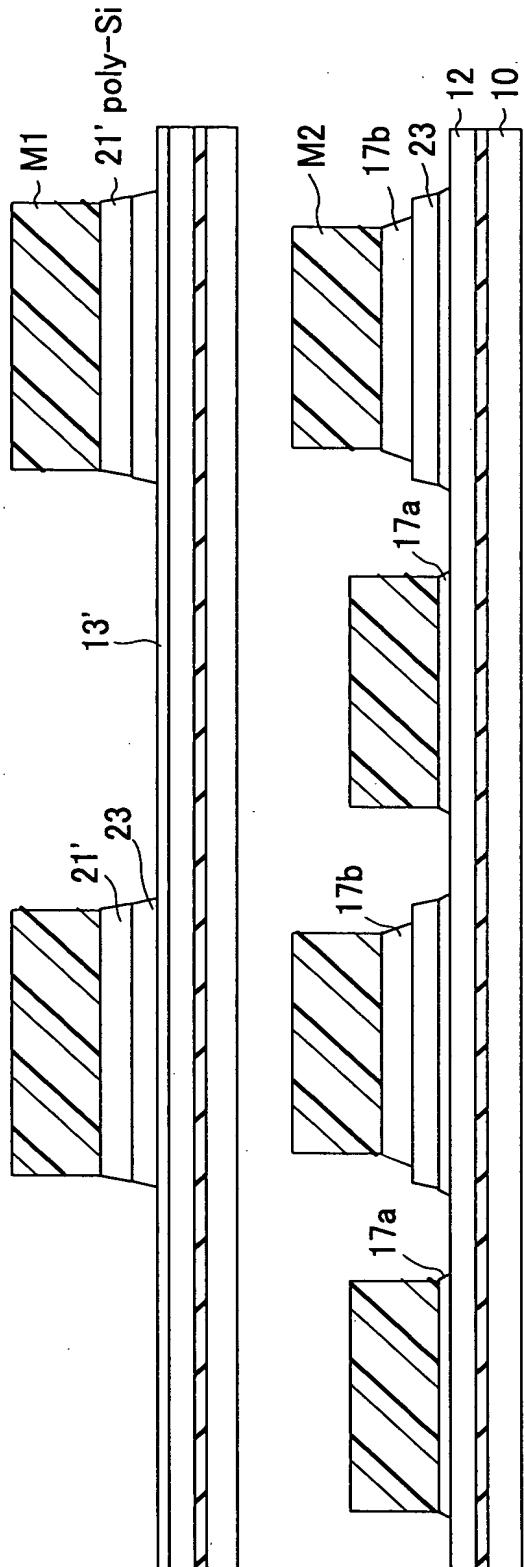


FIG.12C

FIG.12D

N CHANNEL EXCIMER CRYSTALLIZATION REGION
P CHANNEL EXCIMER CRYSTALLIZATION REGION
P CHANNEL HIGH SPEED OPERATION REGION

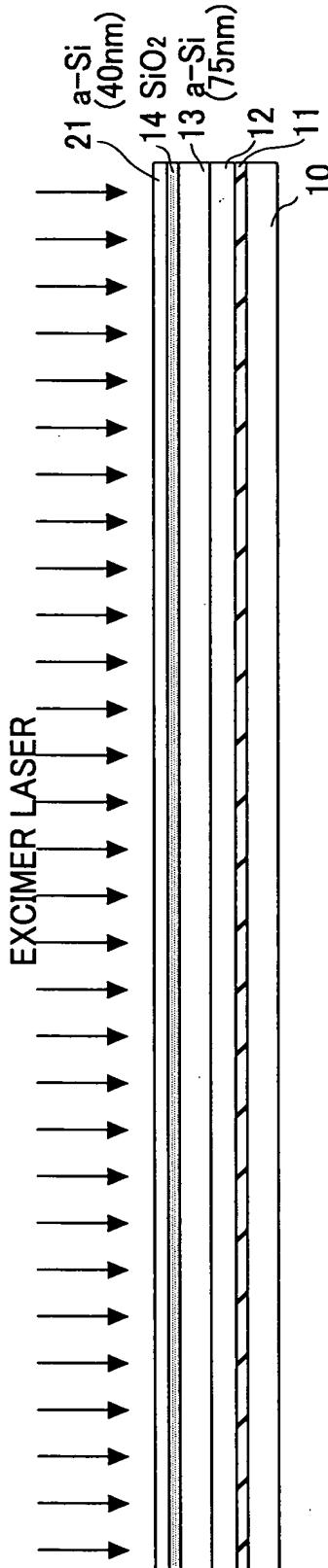


FIG. 13A

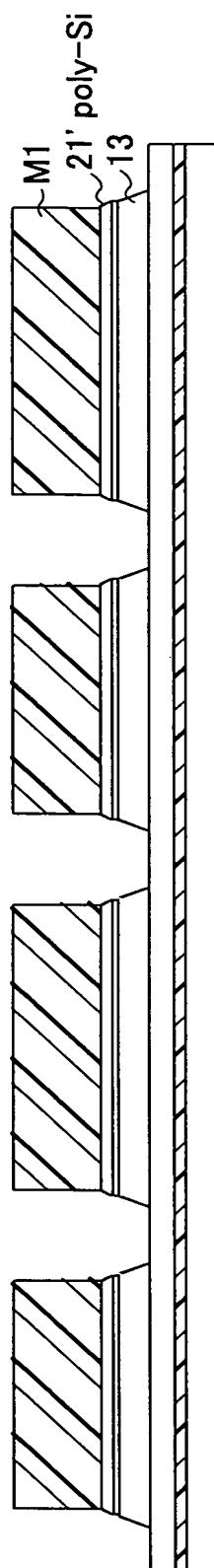


FIG. 13B

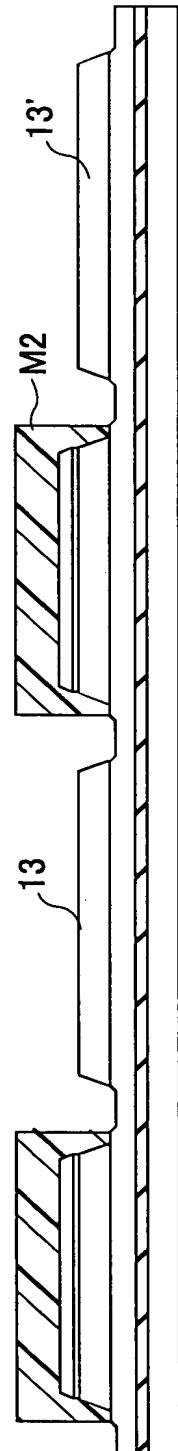


FIG. 13C

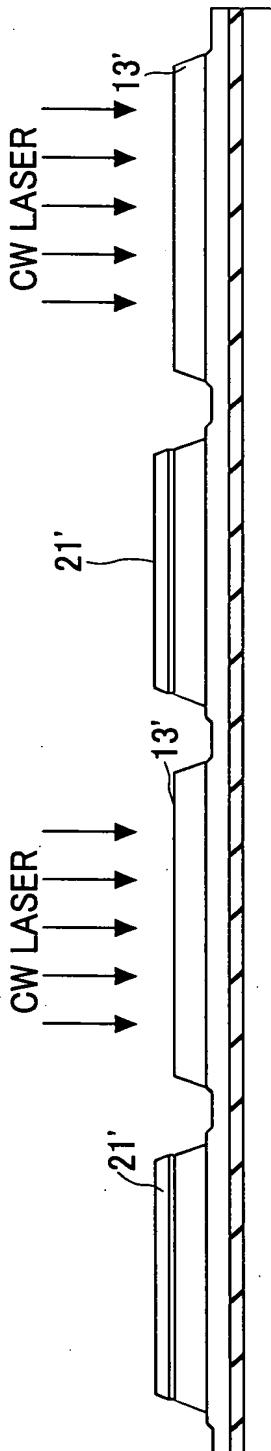


FIG. 13D

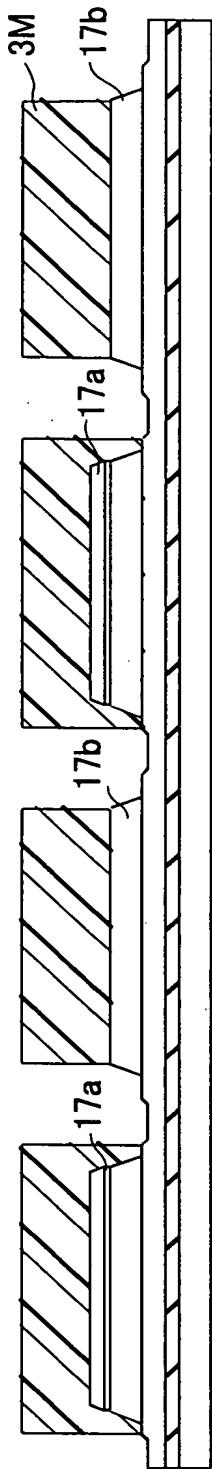


FIG. 13E

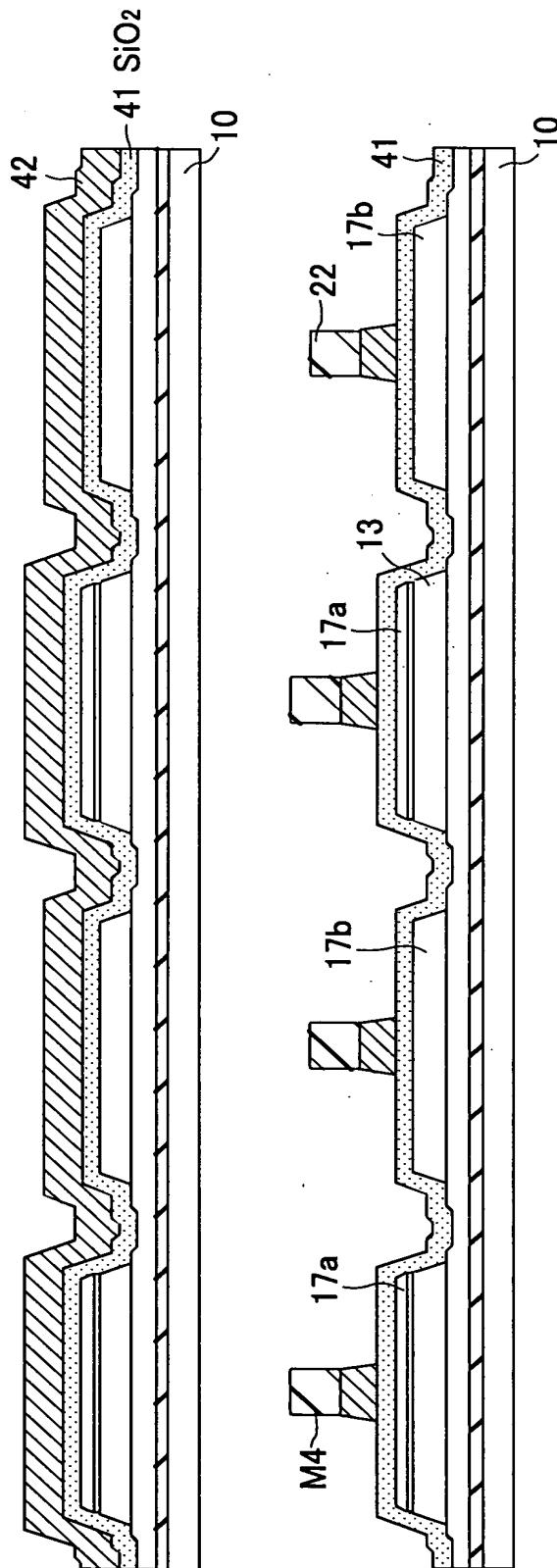


FIG. 13F

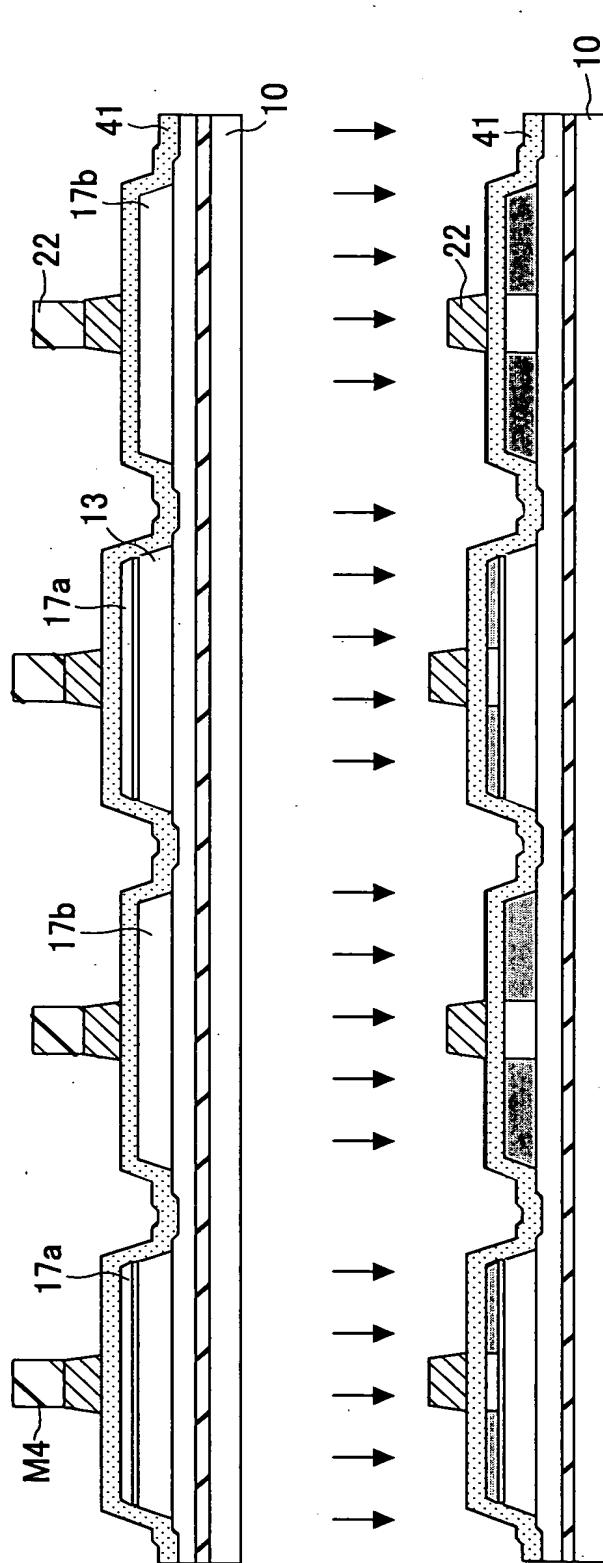


FIG. 13G

FIG. 13H

LOW CONCENTRATION P ION IMPLANTATION

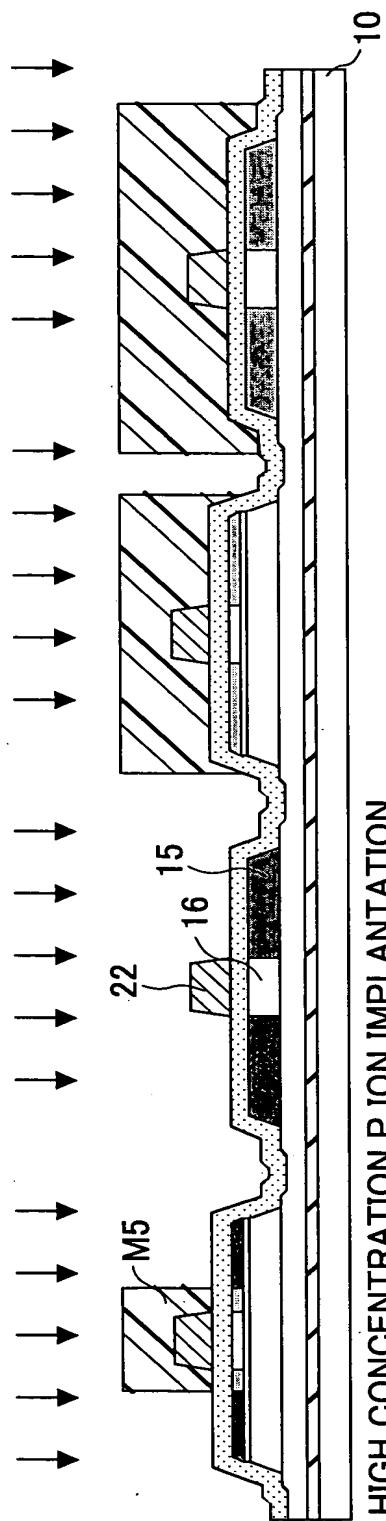


FIG.13I

HIGH CONCENTRATION P ION IMPLANTATION

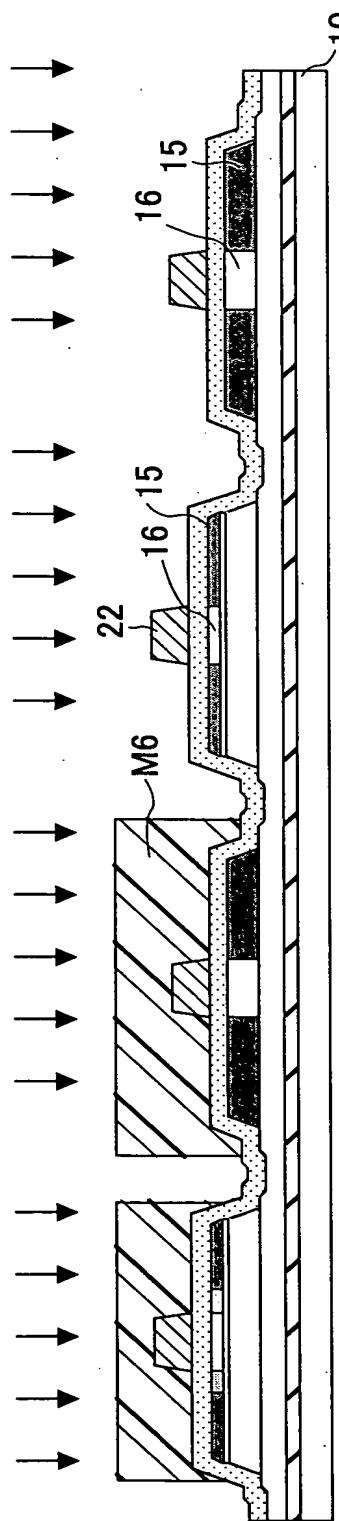


FIG.13J

HIGH CONCENTRATION B ION IMPLANTATION

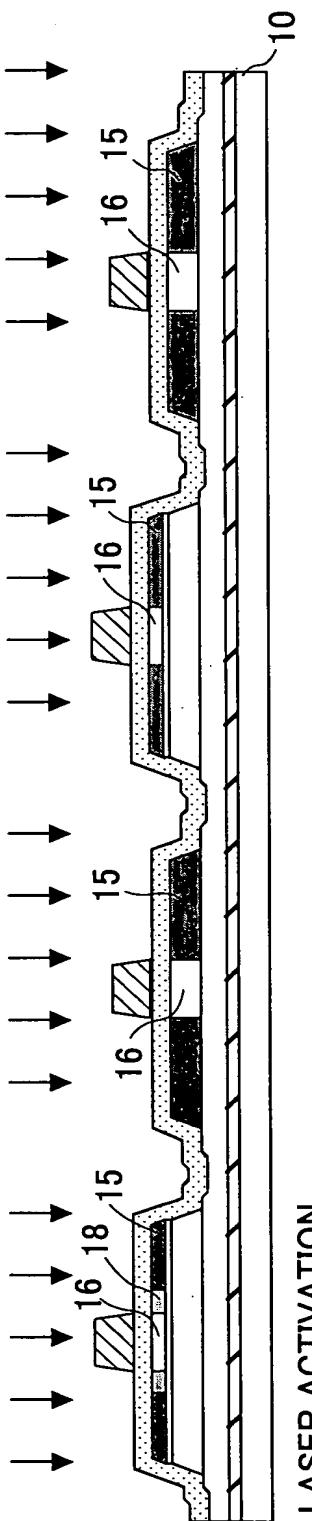


FIG.13K

LASER ACTIVATION

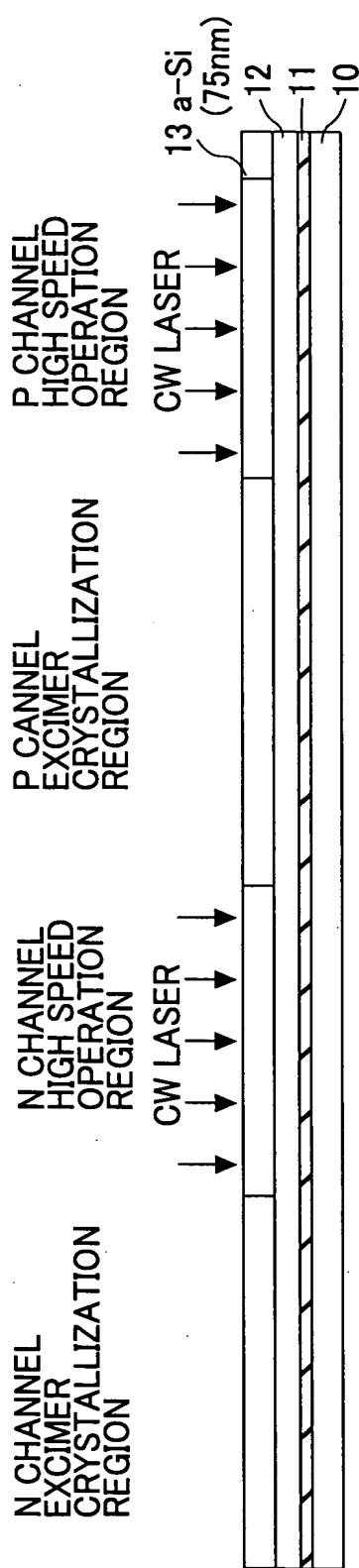


FIG.14A

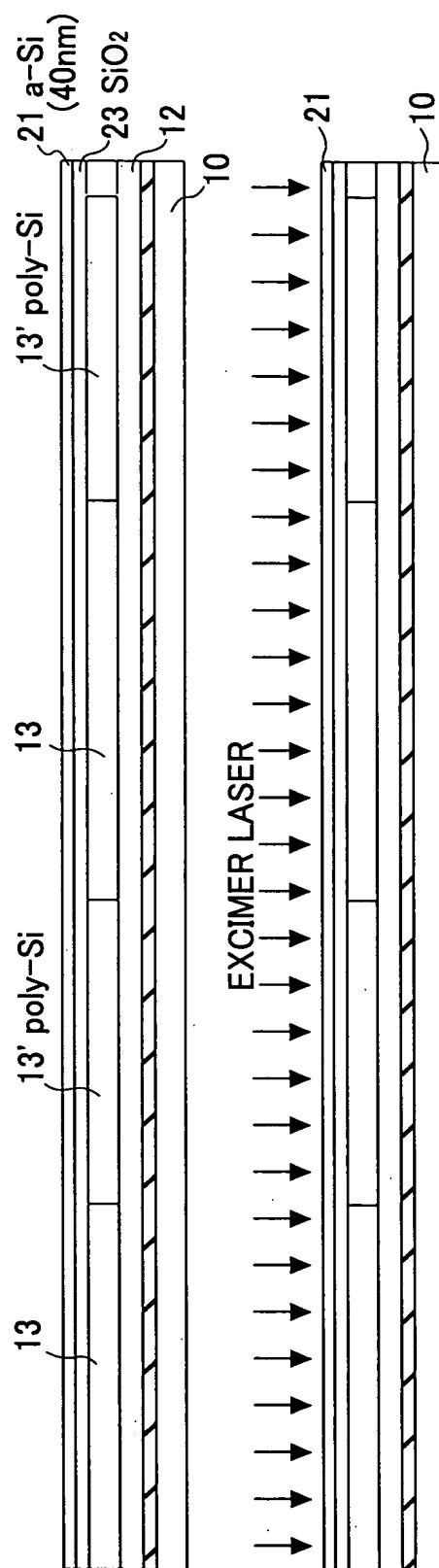


FIG.14B

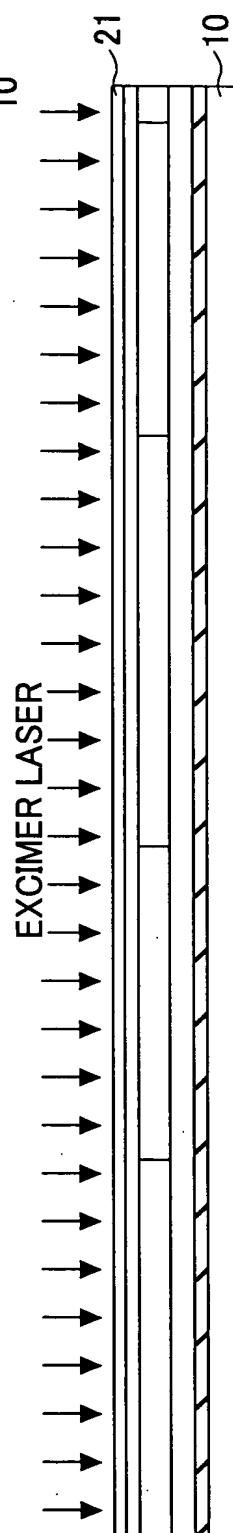


FIG.14C

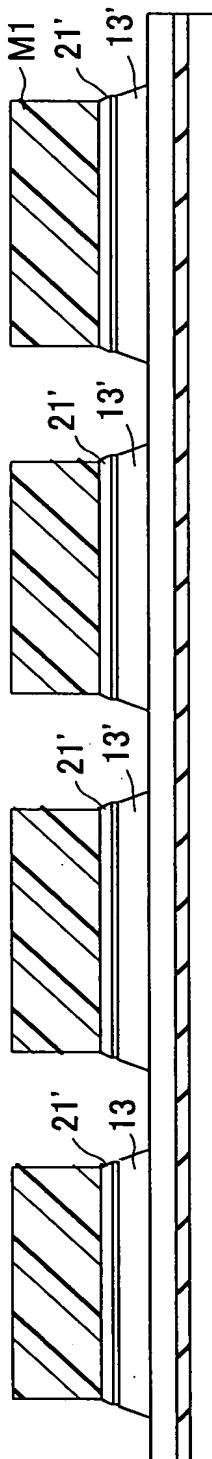


FIG.14D

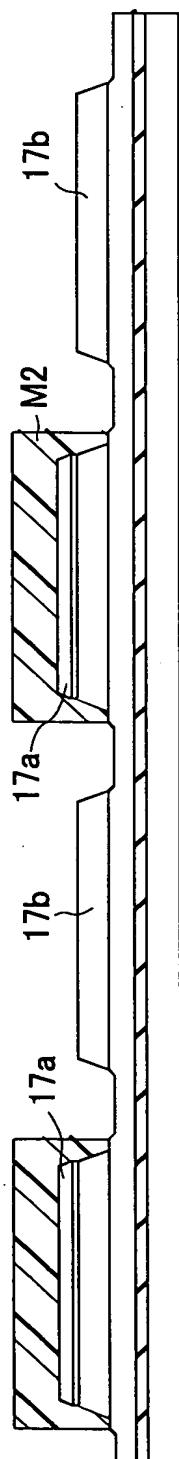


FIG.14E

N CHANNEL EXCIMER CRYSTALLIZATION REGION
 P CHANNEL HIGH SPEED OPERATION REGION
 P CHANNEL HIGH SPEED OPERATION REGION

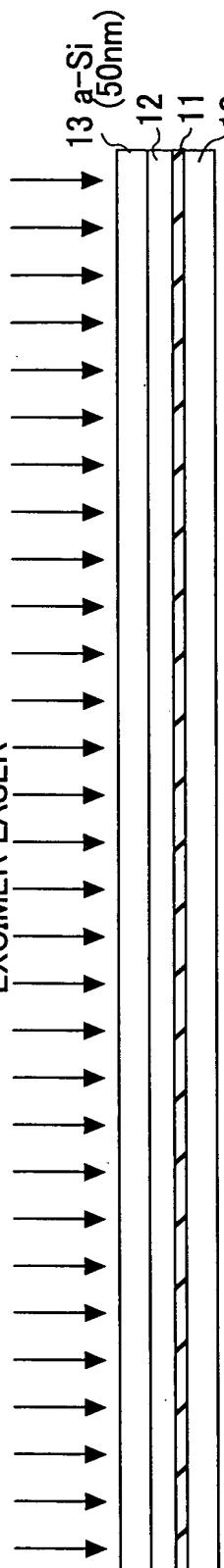


FIG. 15A

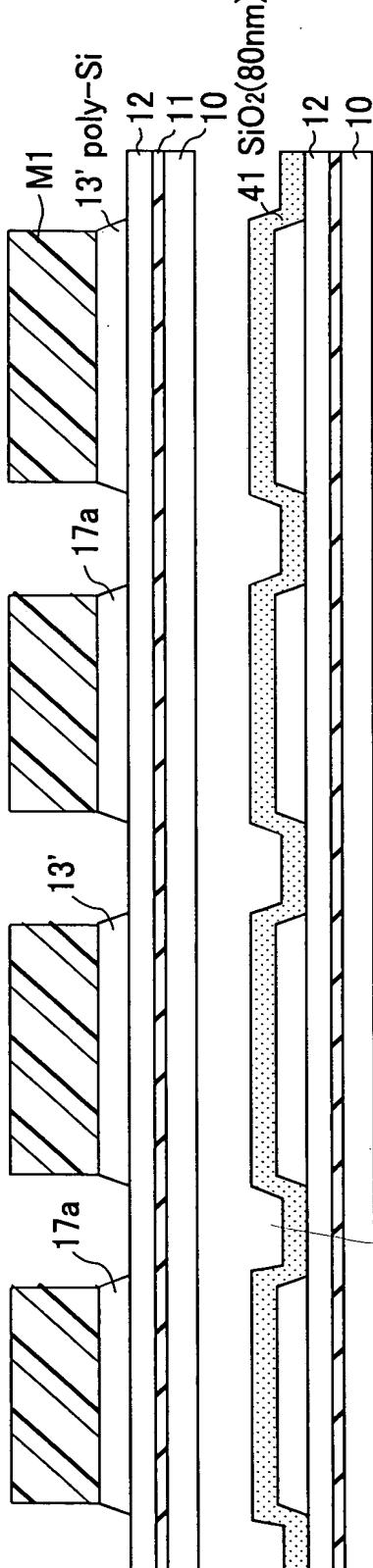


FIG. 15B

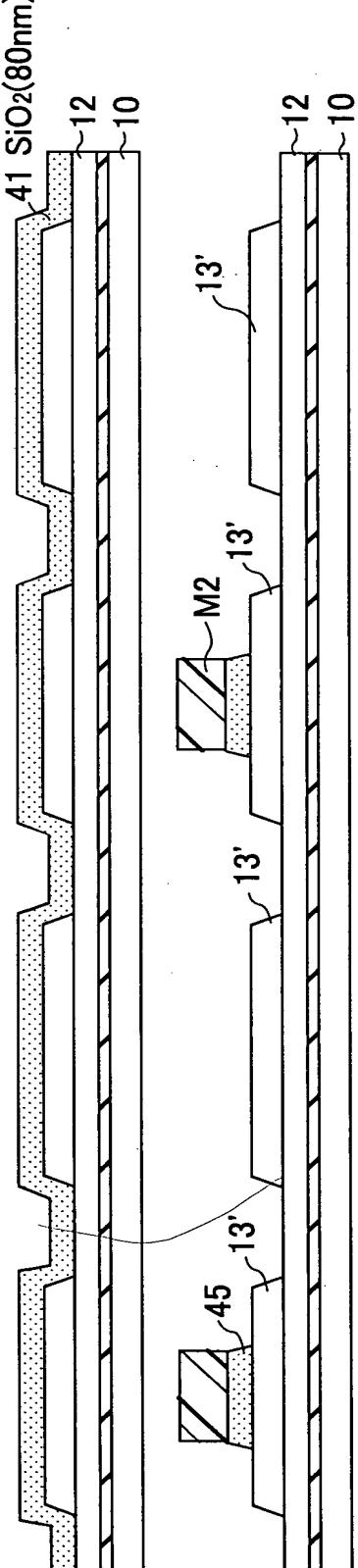


FIG. 15C

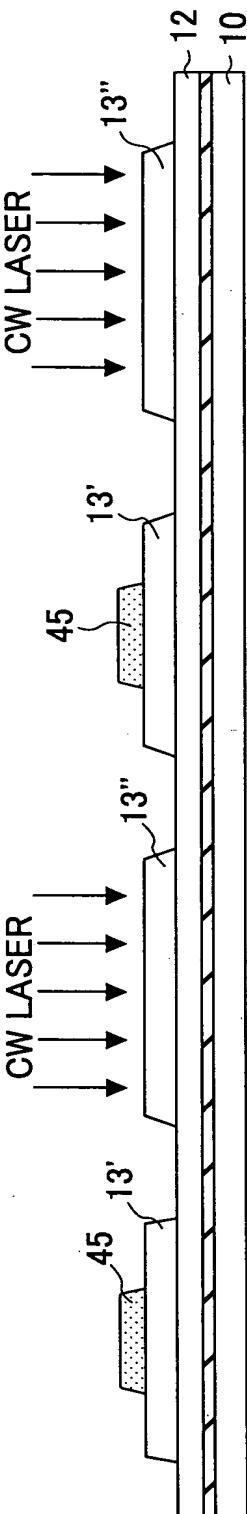


FIG. 15D

FIG. 15E

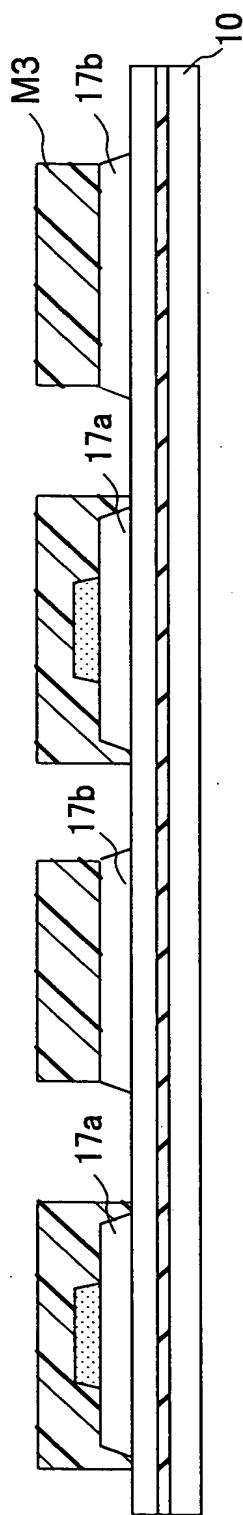


FIG. 15F

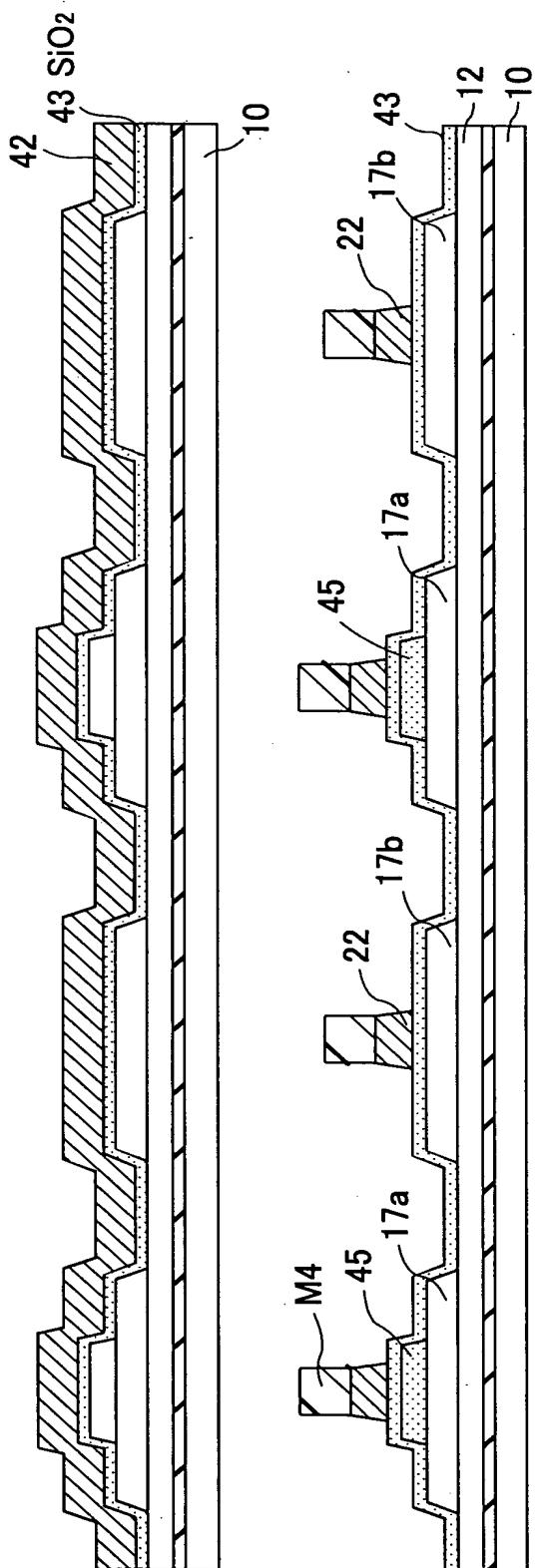


FIG. 15G

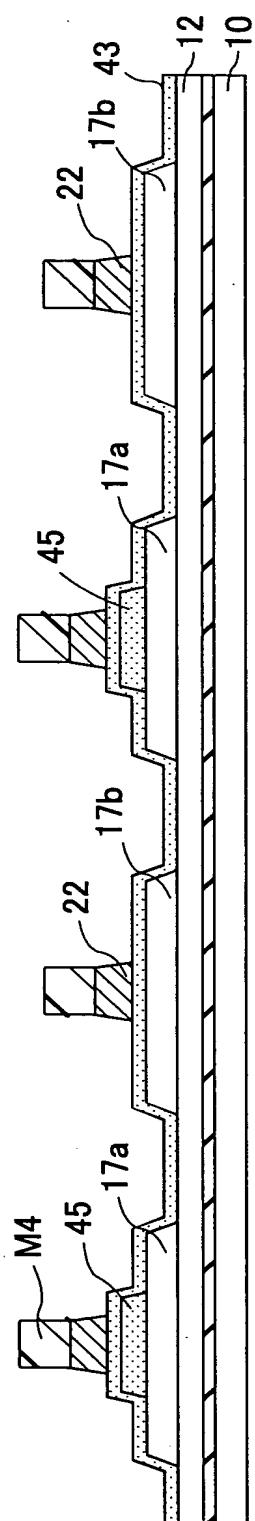


FIG. 15H

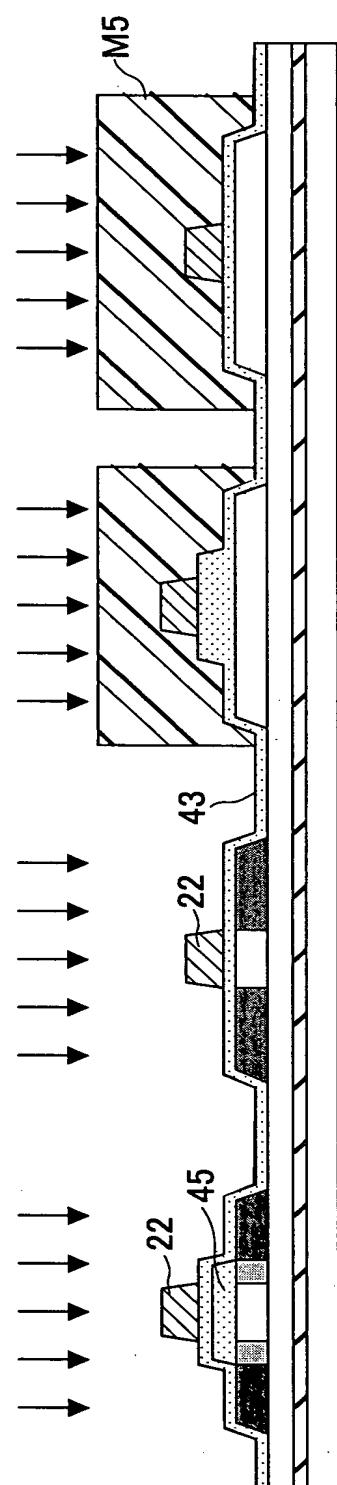


FIG. 15I

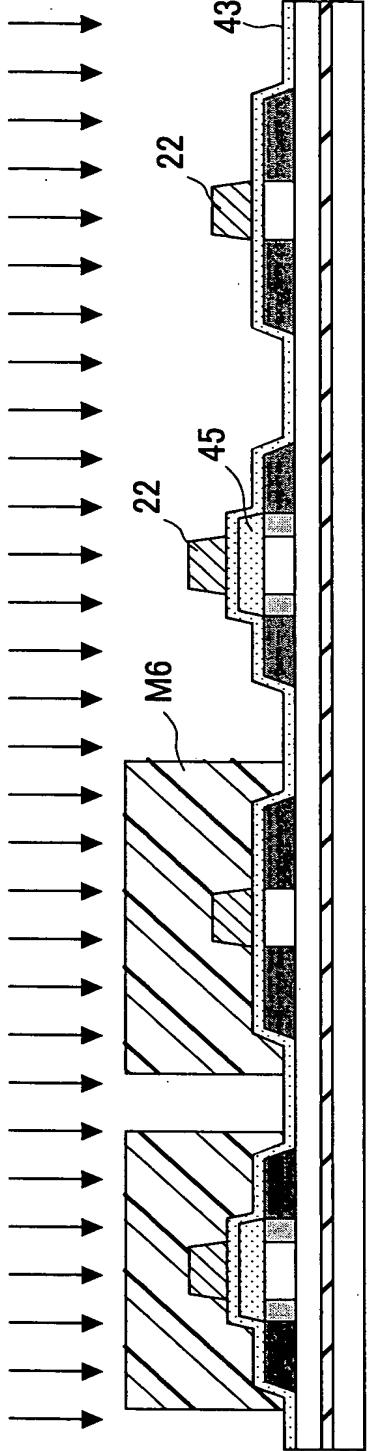


FIG. 15J

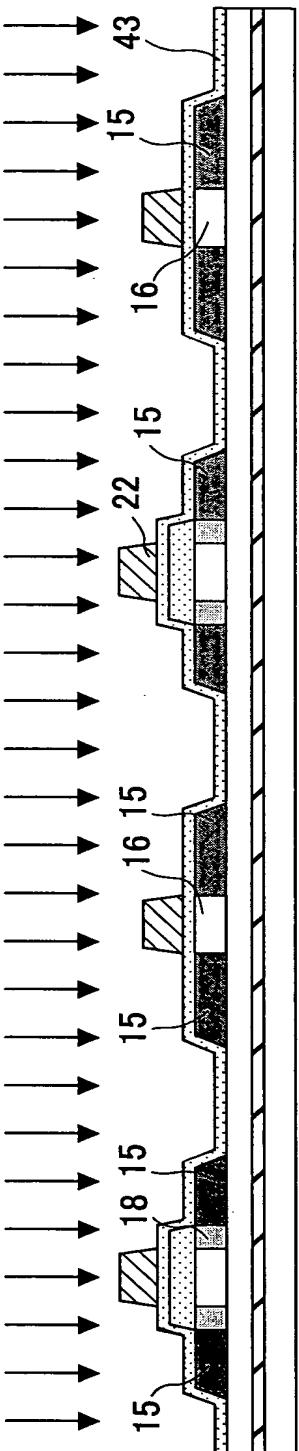


FIG. 15K

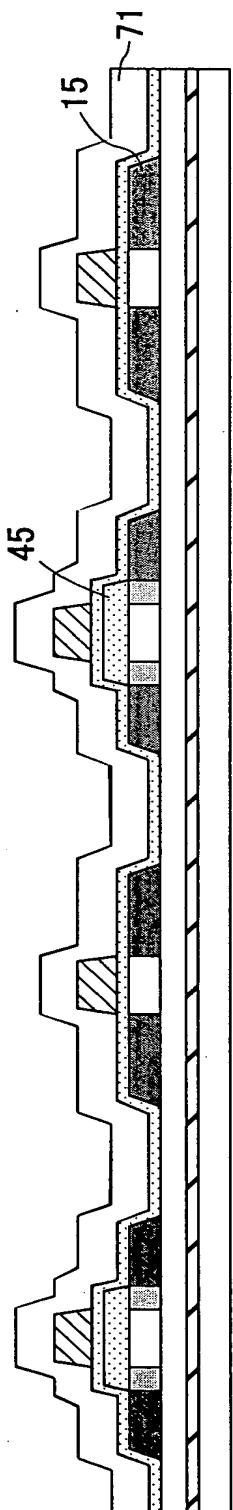


FIG. 15L

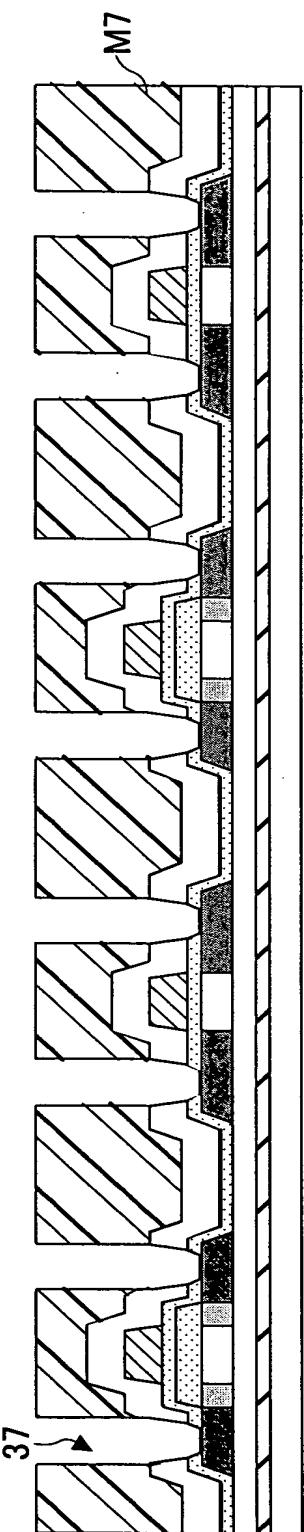


FIG. 15M

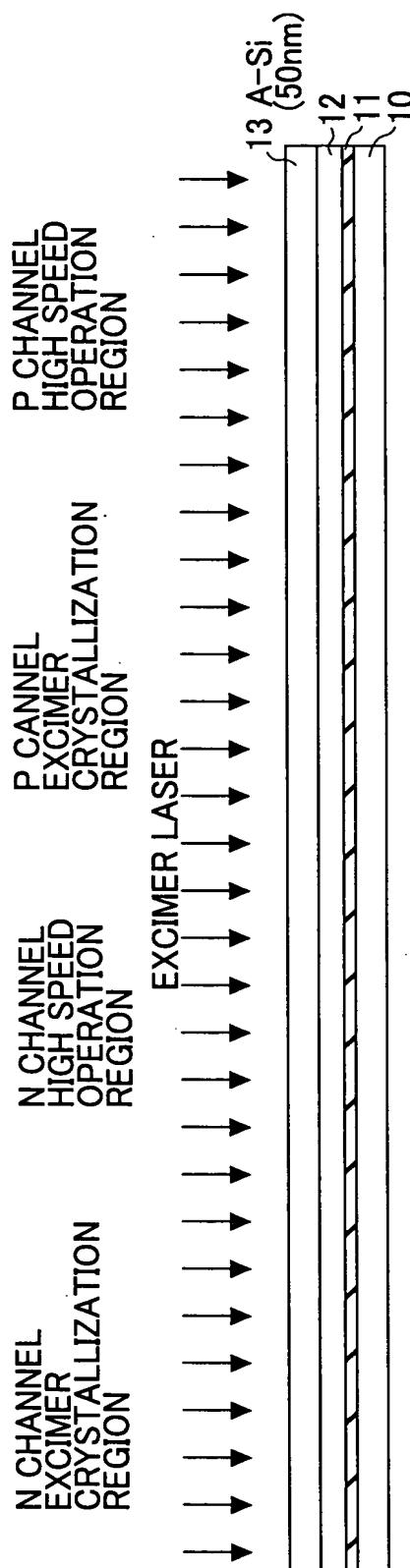


FIG.16A

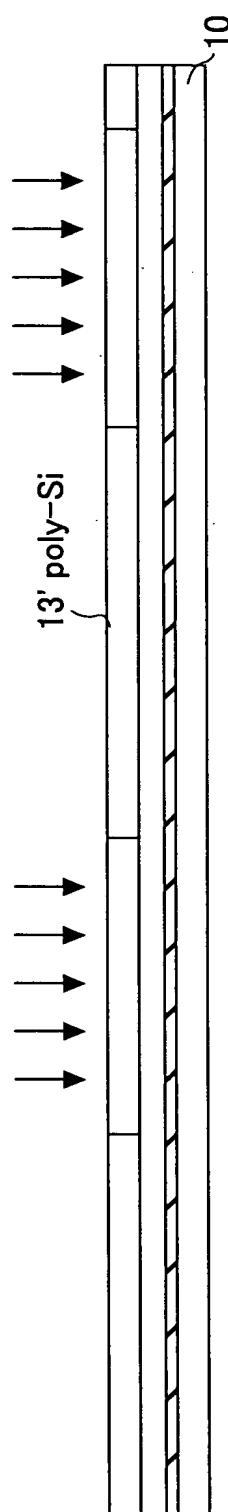


FIG.16B

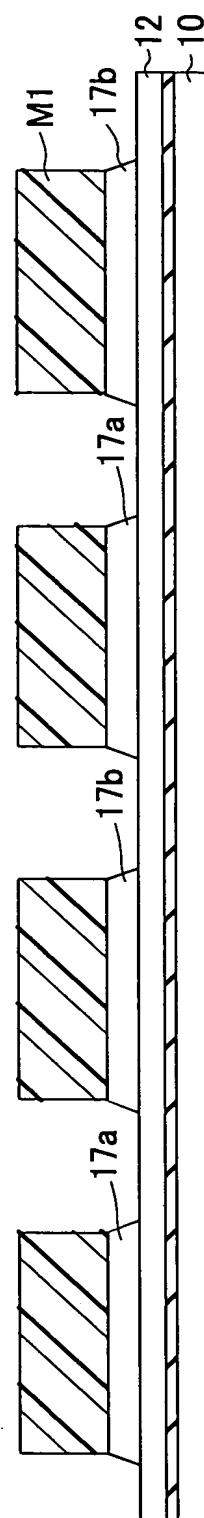


FIG.16C

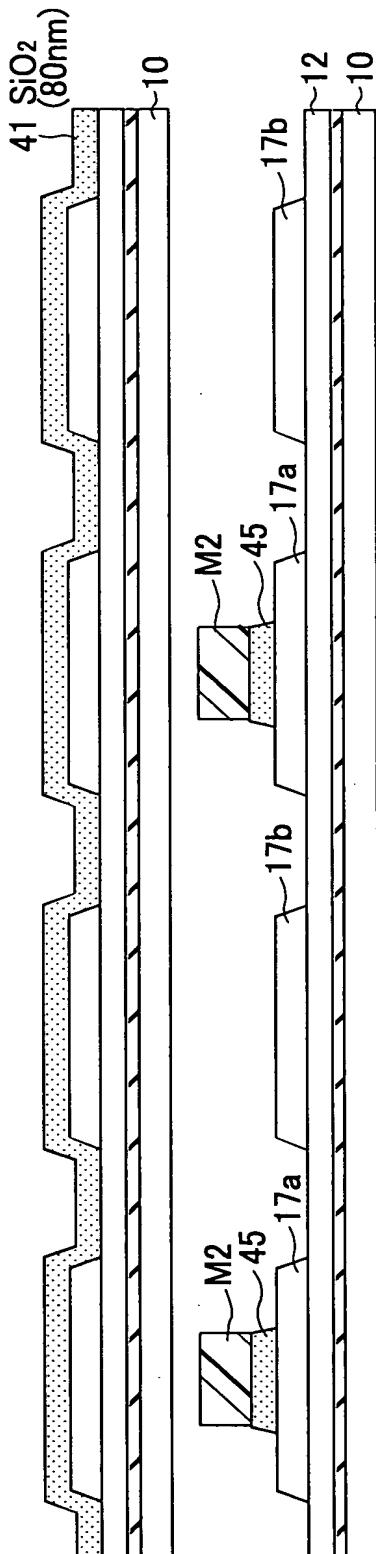


FIG.16E

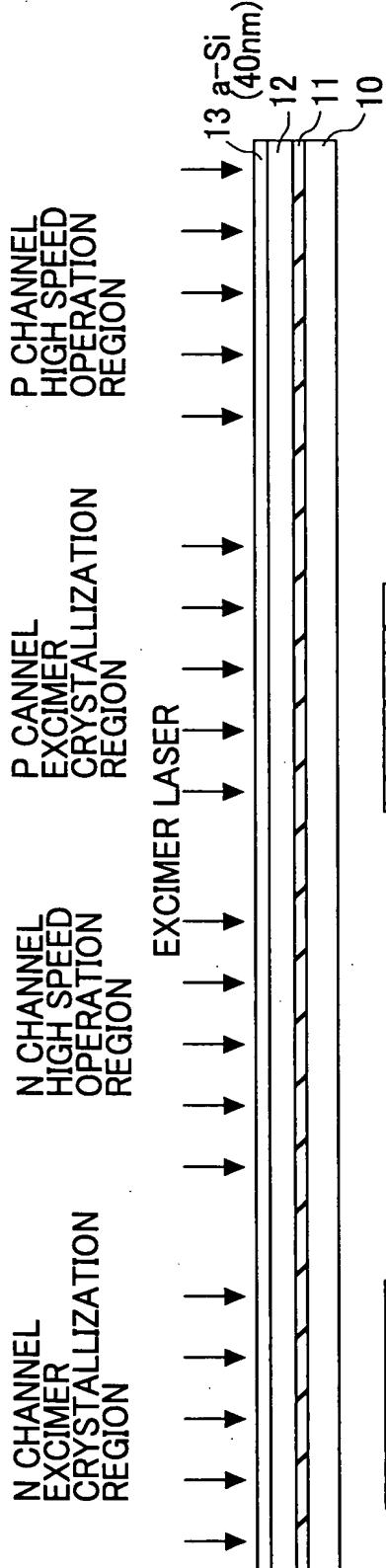


FIG.17A

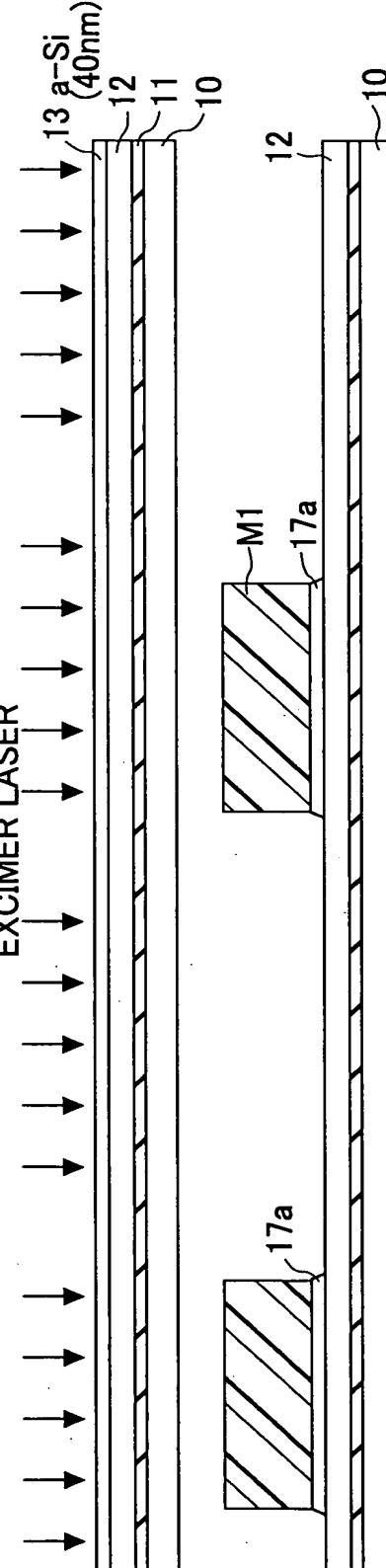


FIG.17B

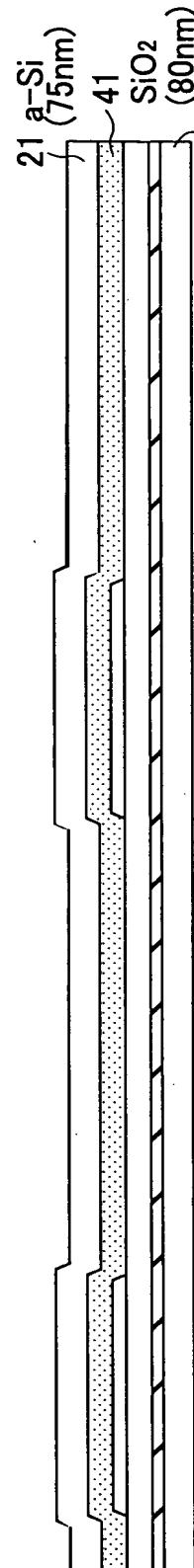


FIG.17C

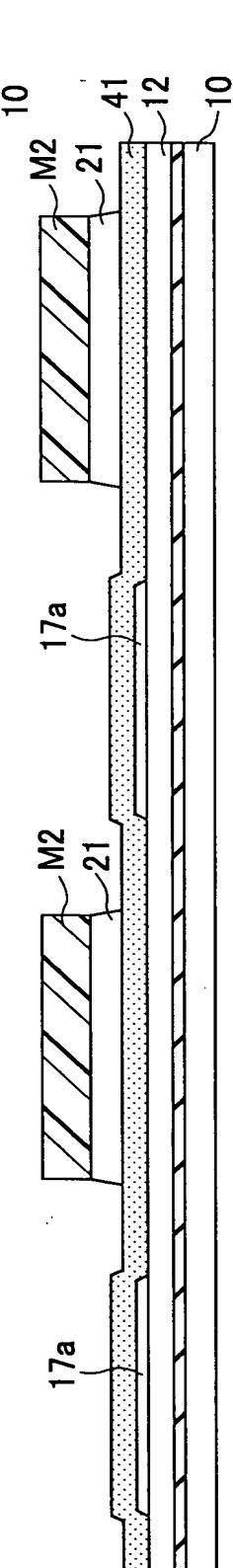


FIG.17D

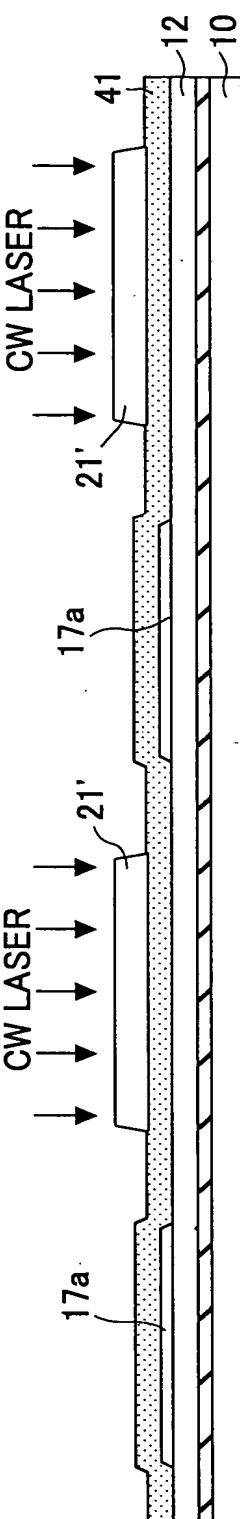


FIG.17E

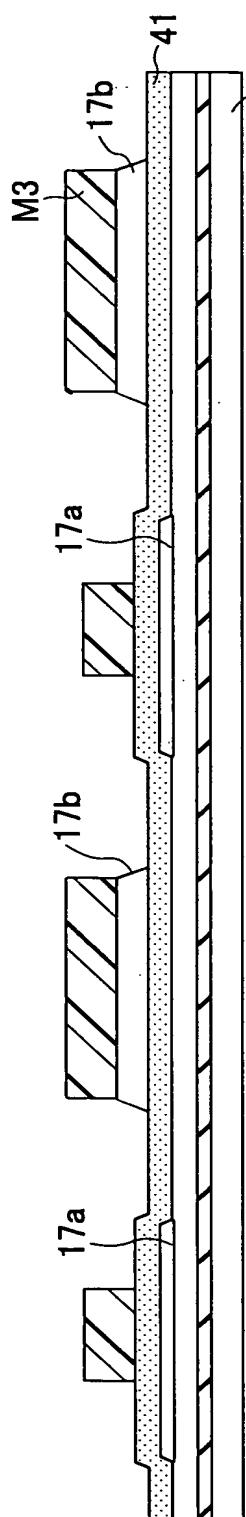


FIG. 17F

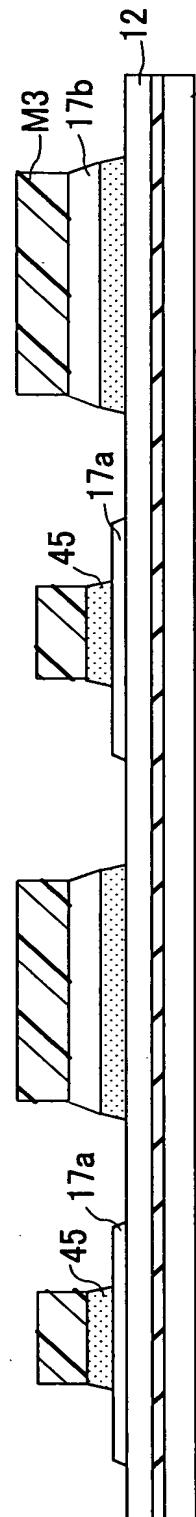


FIG. 17G

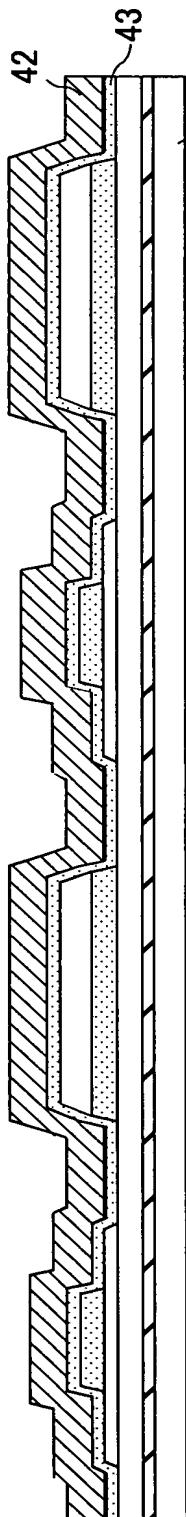


FIG. 17H

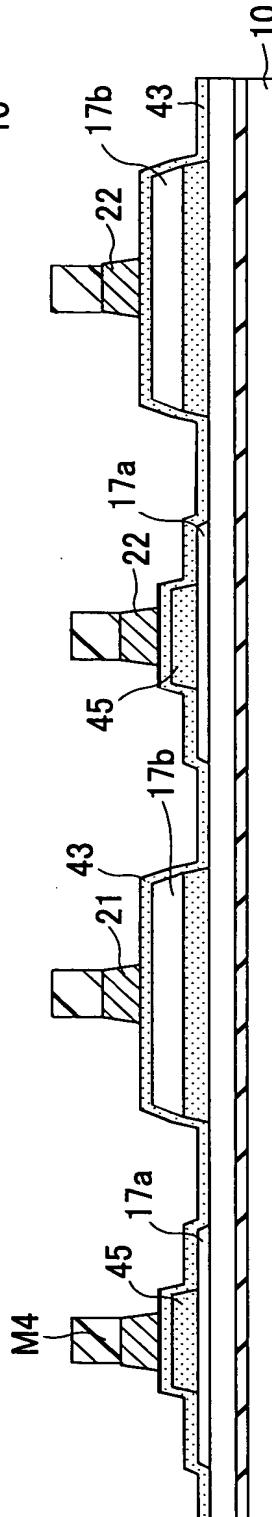


FIG. 17I

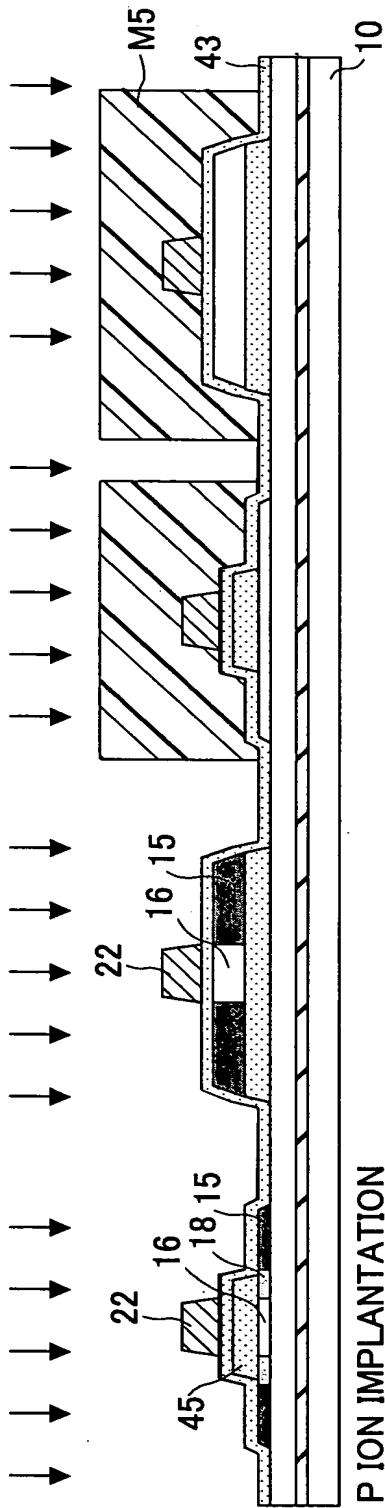


FIG.17J

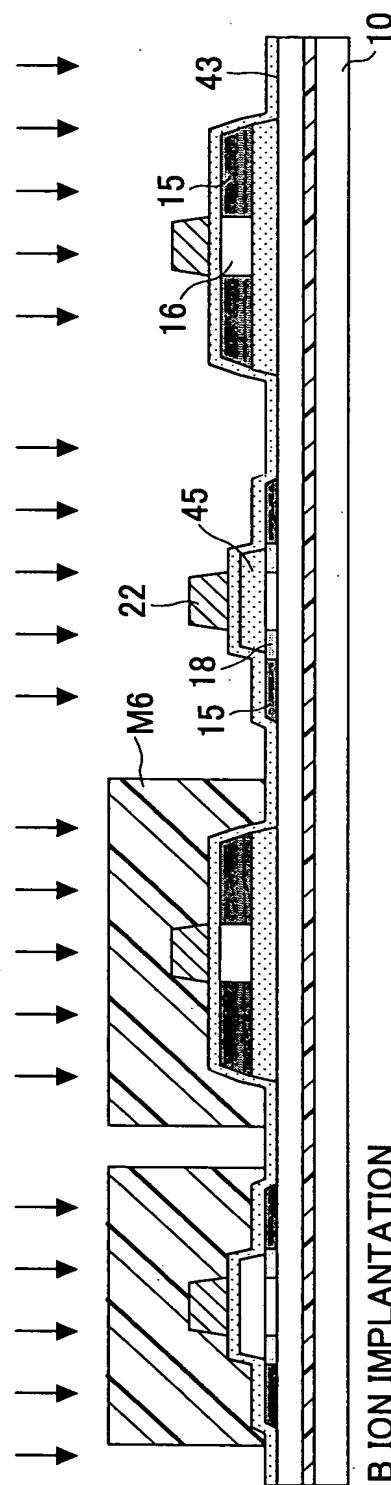


FIG.17K

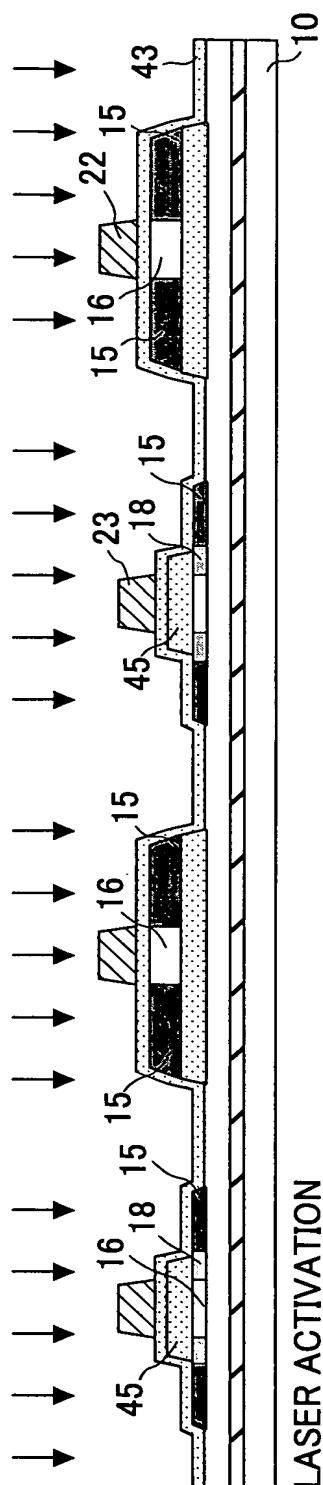


FIG.17L

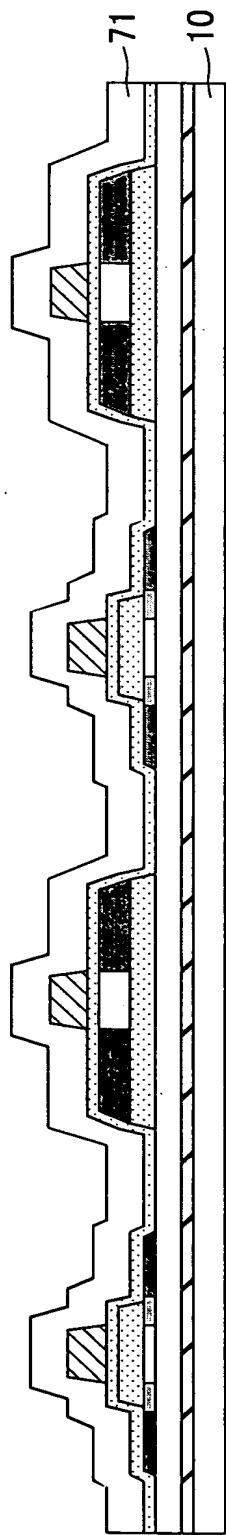


FIG.17M

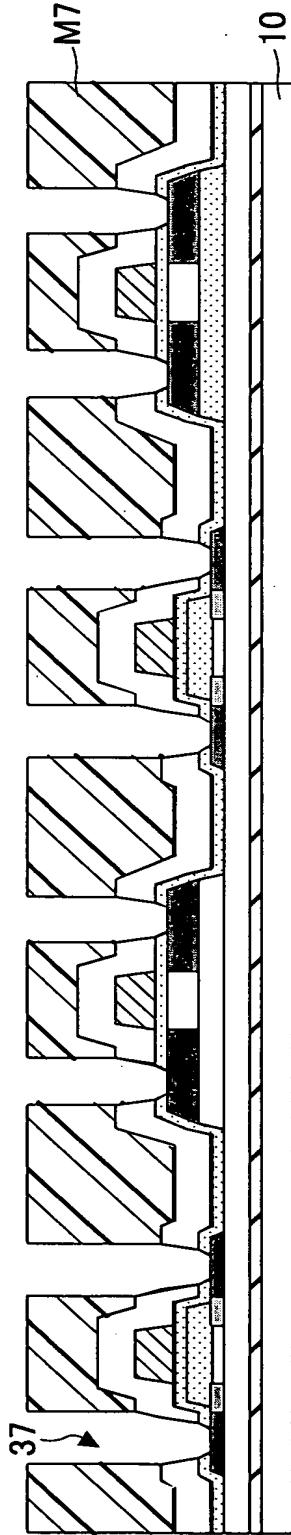


FIG.17N

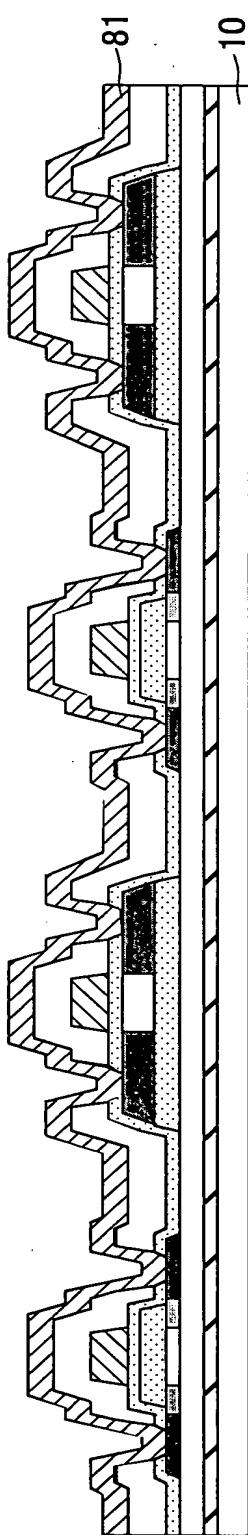


FIG.17O

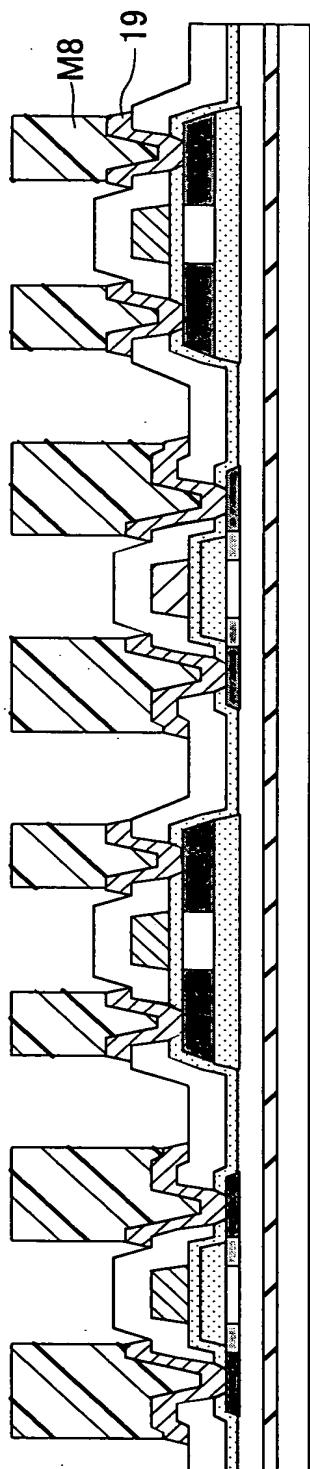


FIG.17P

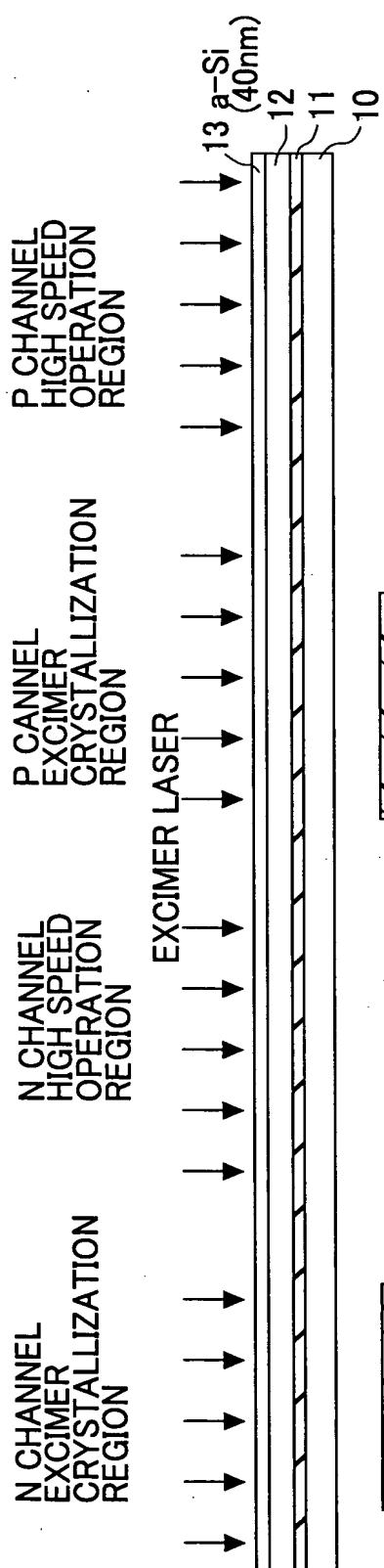


FIG. 18A

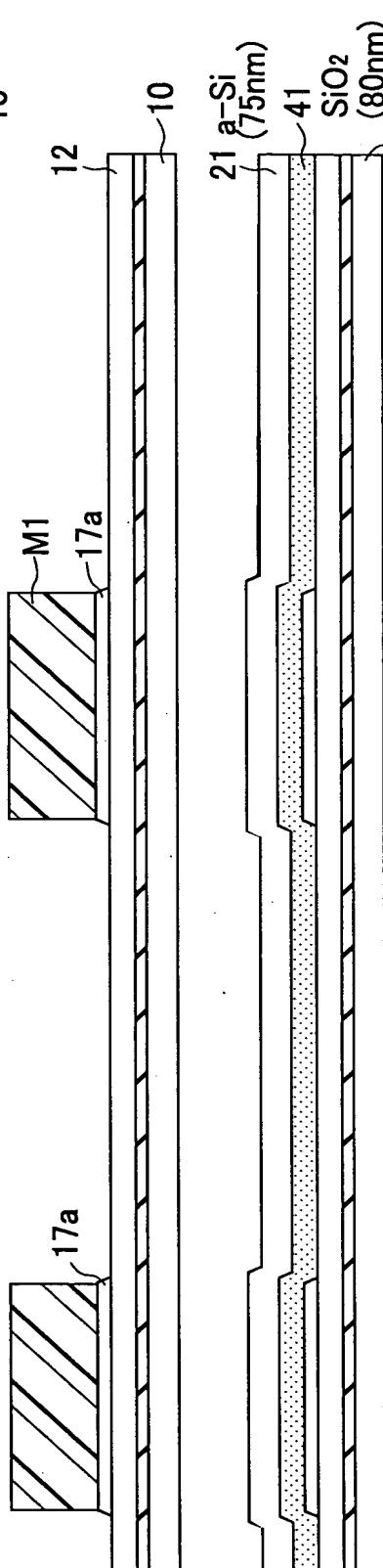


FIG. 18B

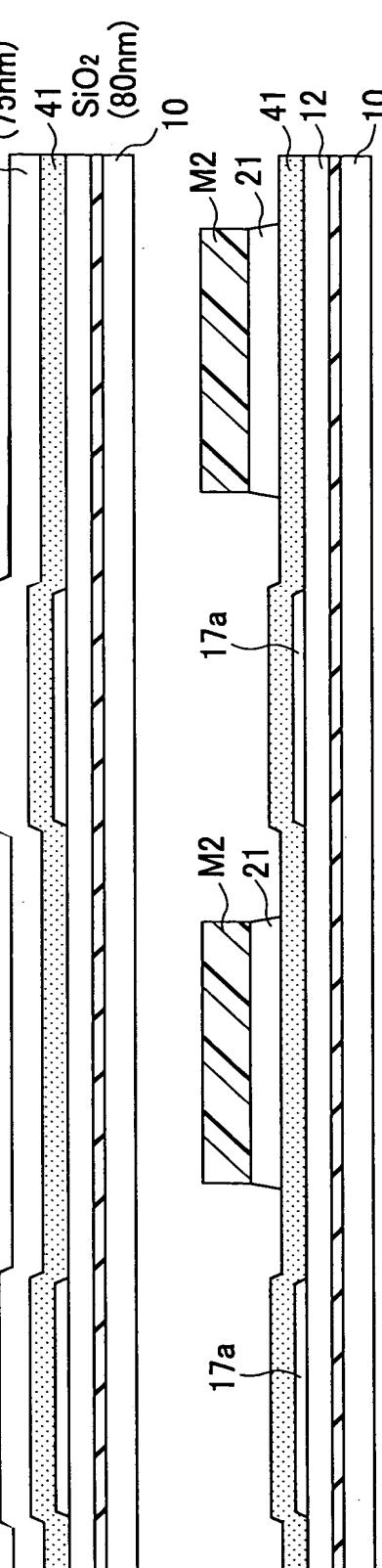


FIG. 18C

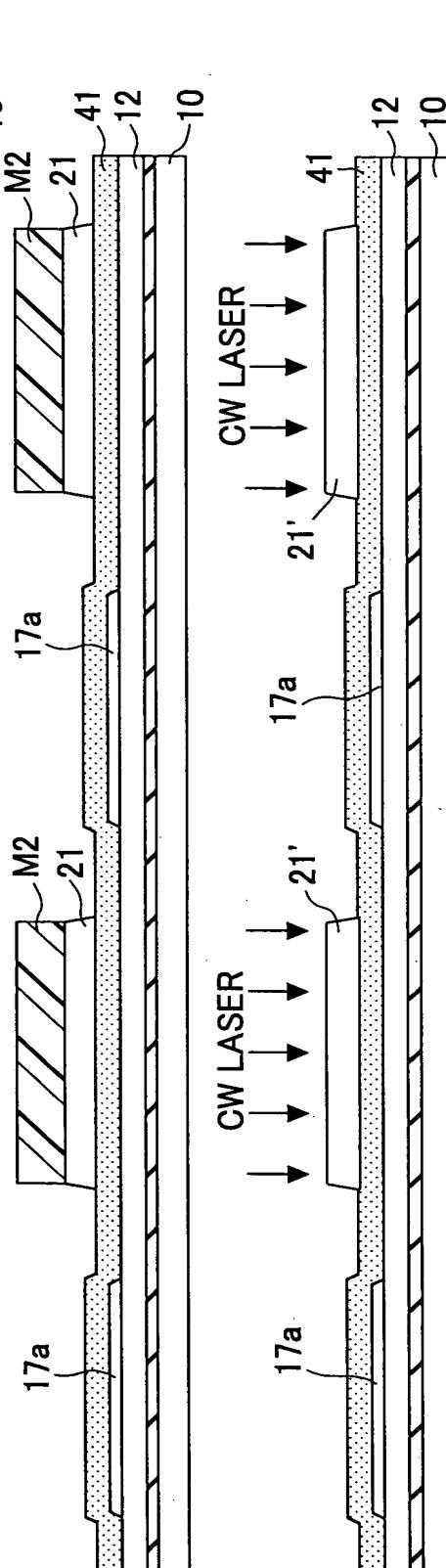
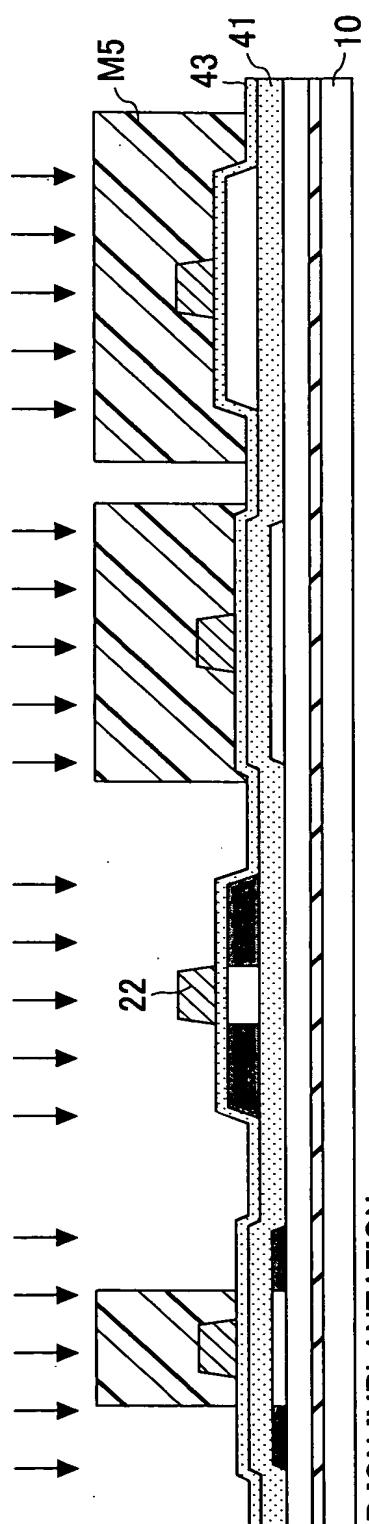
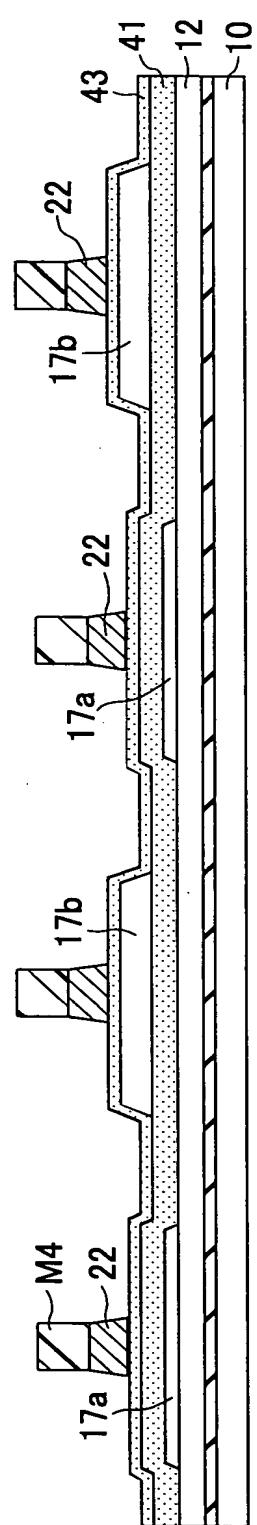
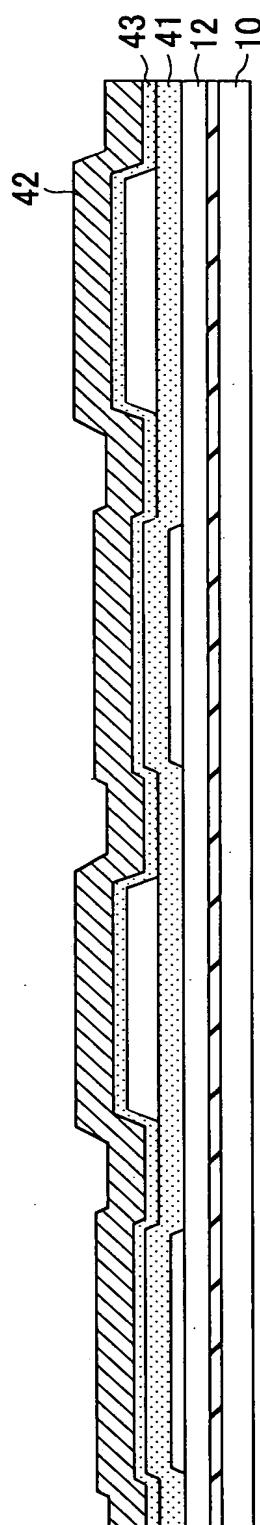
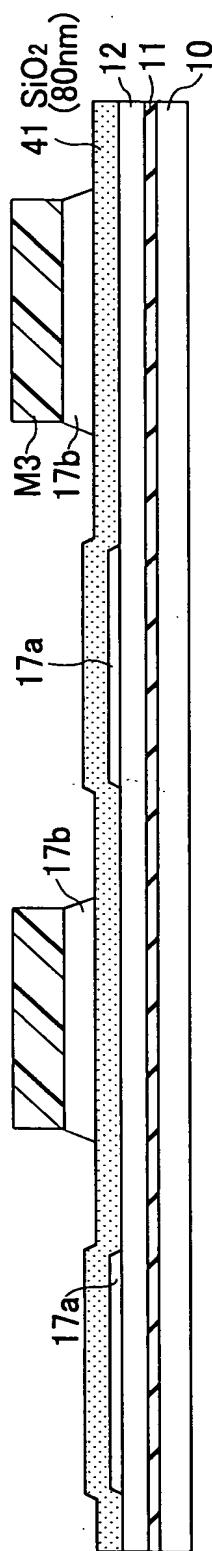


FIG. 18D

FIG. 18E



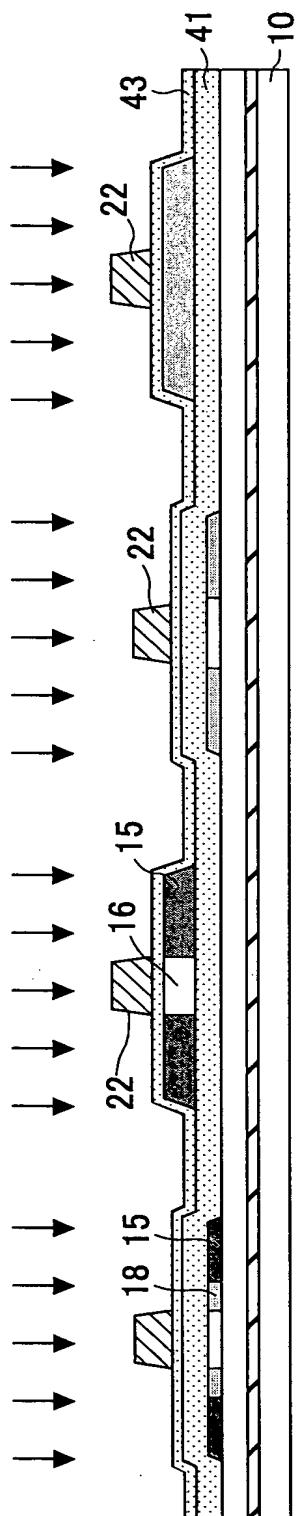


FIG.18J

LOW CONCENTRATION PION IMPLANTATION

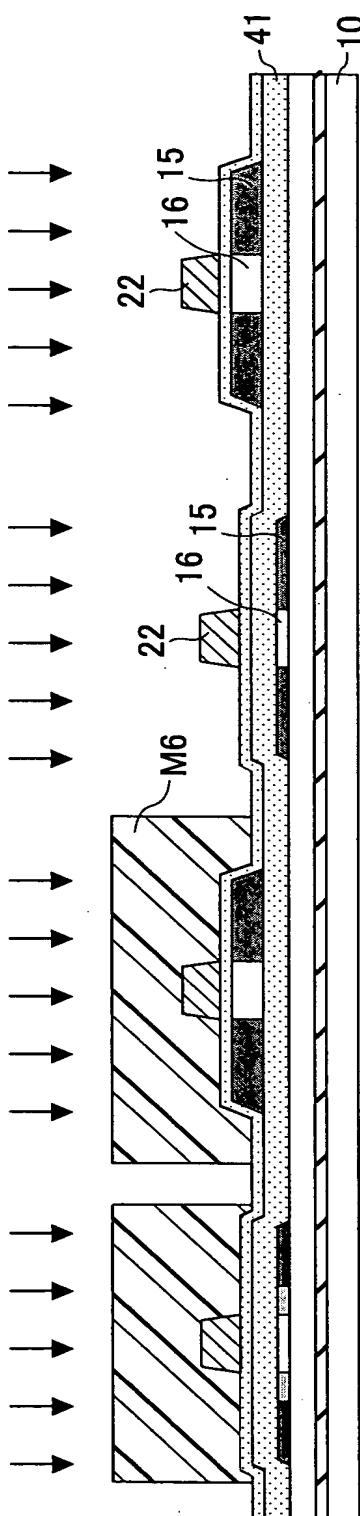


FIG.18K

B ION IMPLANTATION

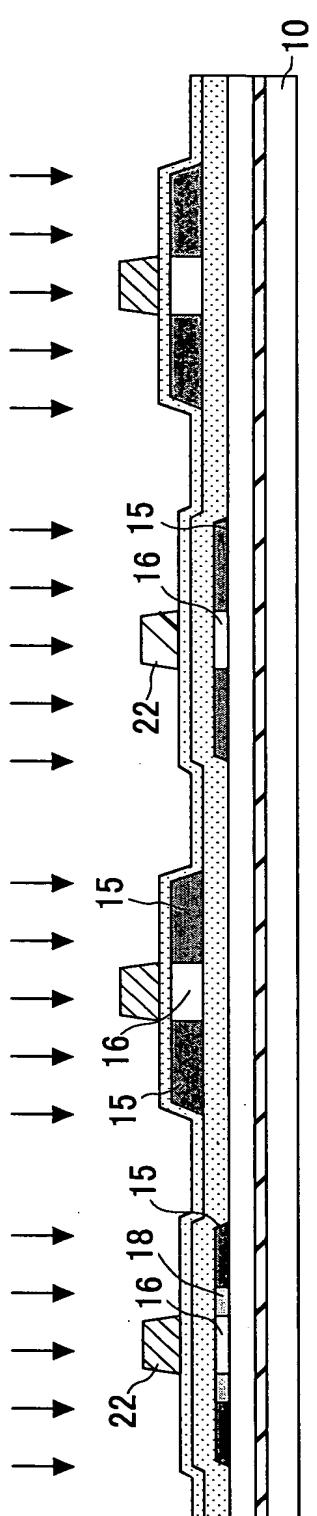


FIG.18L

LASER ACTIVATION

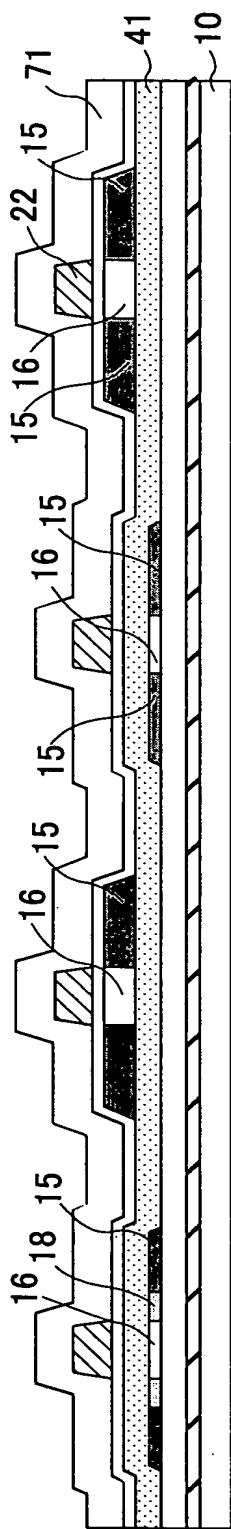


FIG. 18M

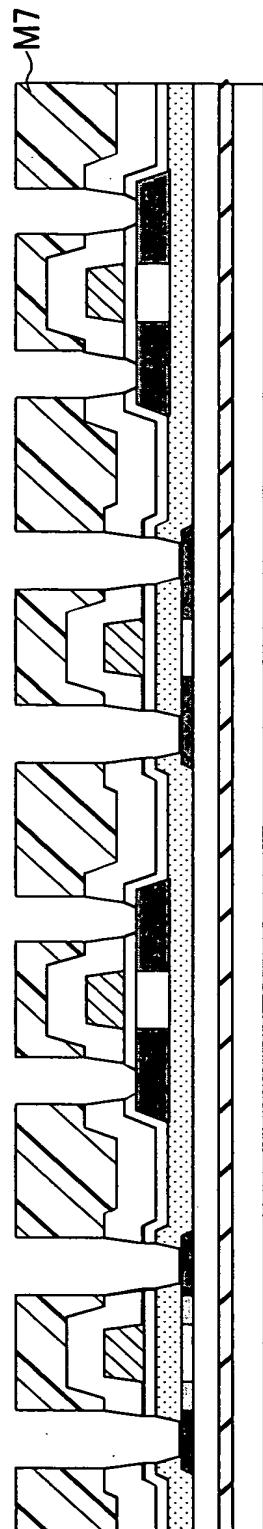


FIG. 18N

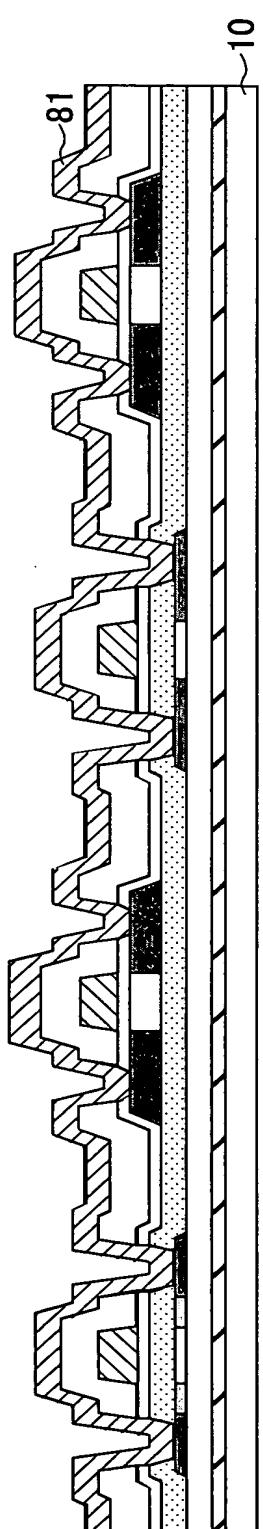


FIG. 18O

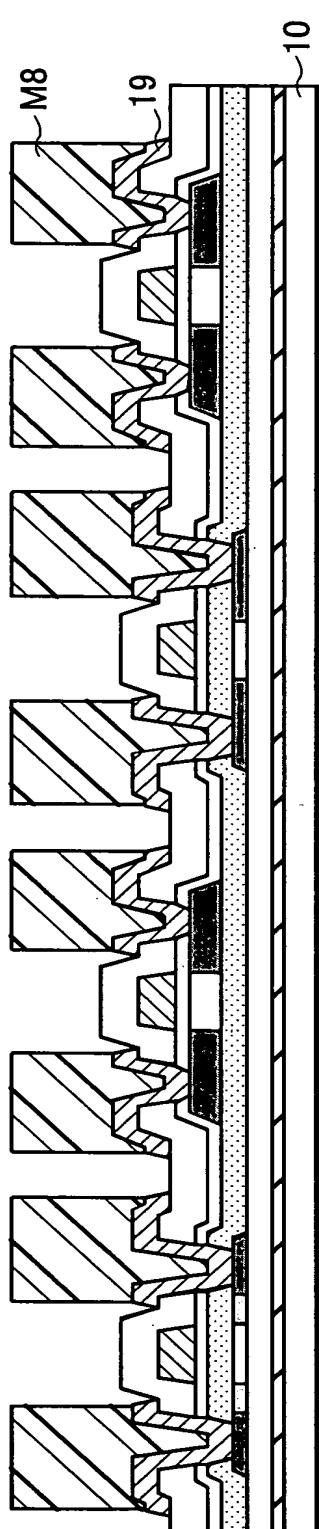


FIG. 18P

**P CHANNEL
HIGH SPEED
OPERATION
REGION**

**P CHANNEL
EXCIMER
CRYSTALLIZATION
REGION**

**N CHANNEL
HIGH SPEED
OPERATION
REGION**

**N CHANNEL
EXCIMER
CRYSTALLIZATION
REGION**

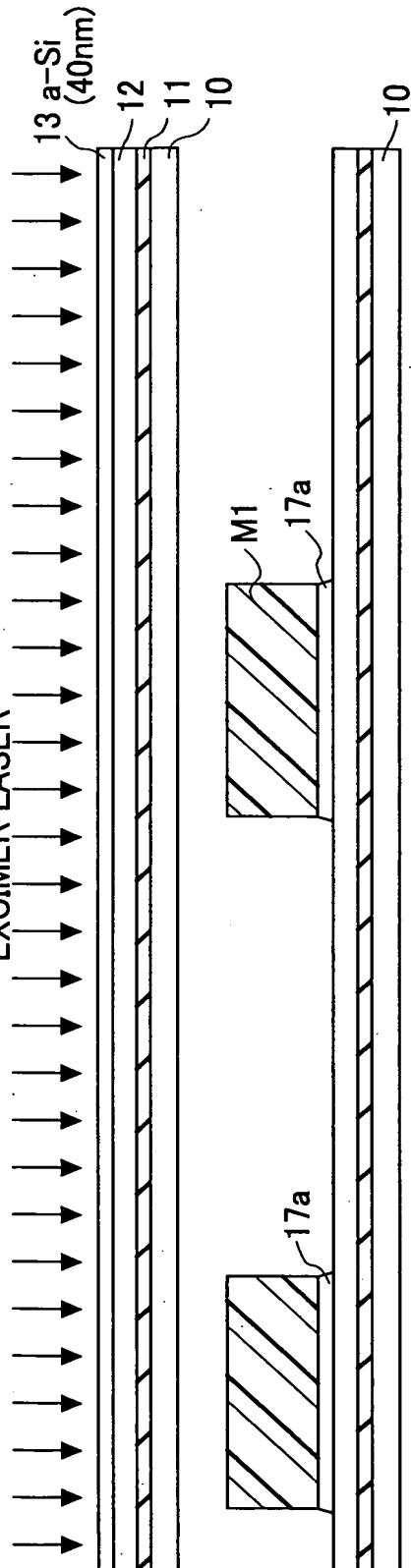


FIG. 19A

N CHANNEL HIGH SPEED OPERATION REGION

P CHANNEL EXCIMER CRYSTALLIZATION REGION

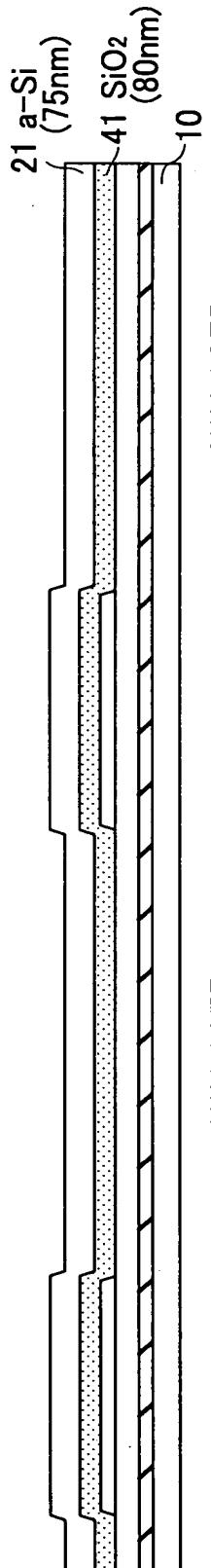


FIG. 19C

P CHANNEL
HIGH SPEED
OPERATION
REGION

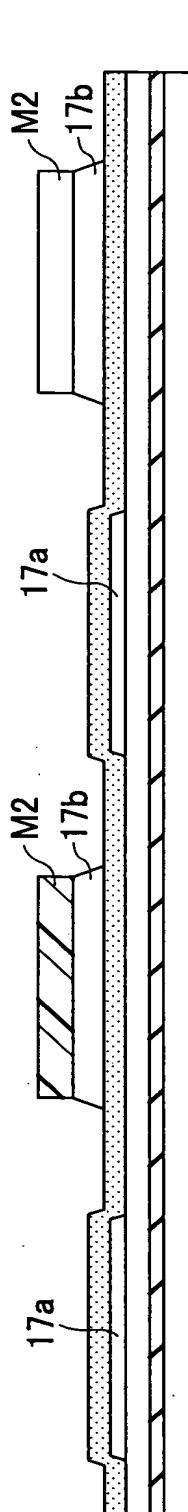


FIG. 19D

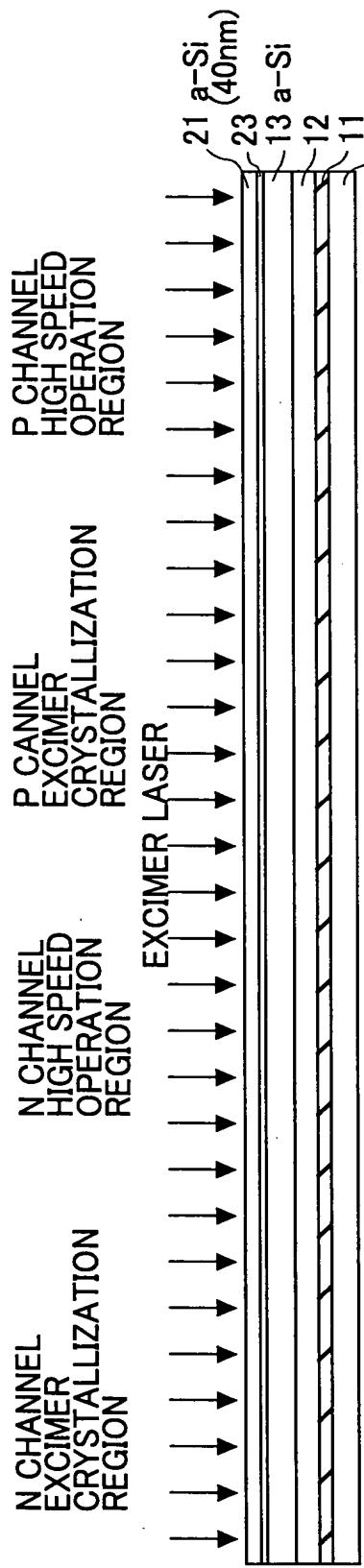


FIG.20A

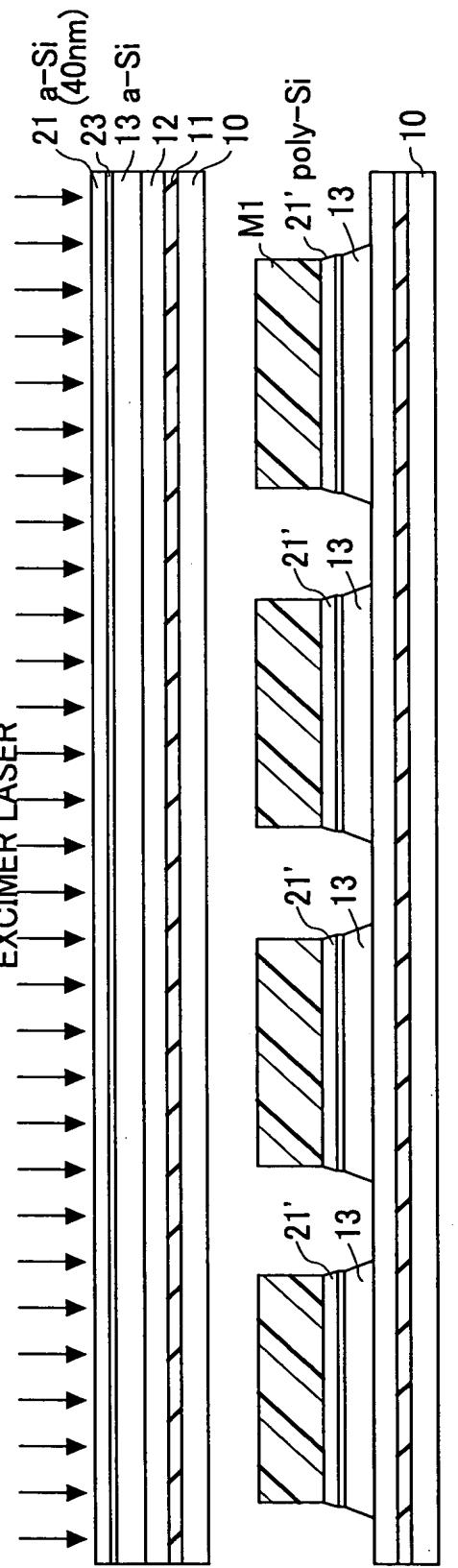


FIG.20B

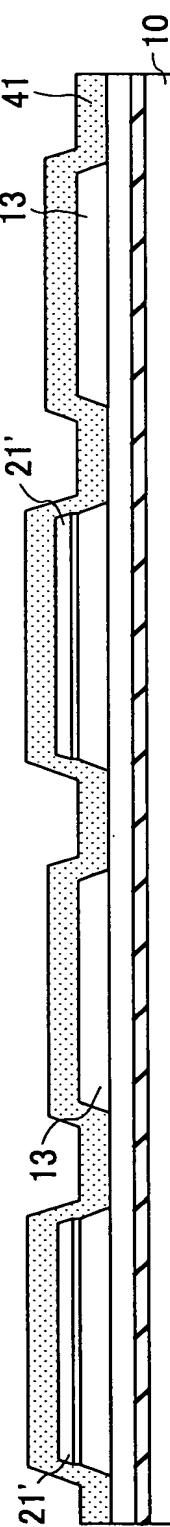


FIG.20C

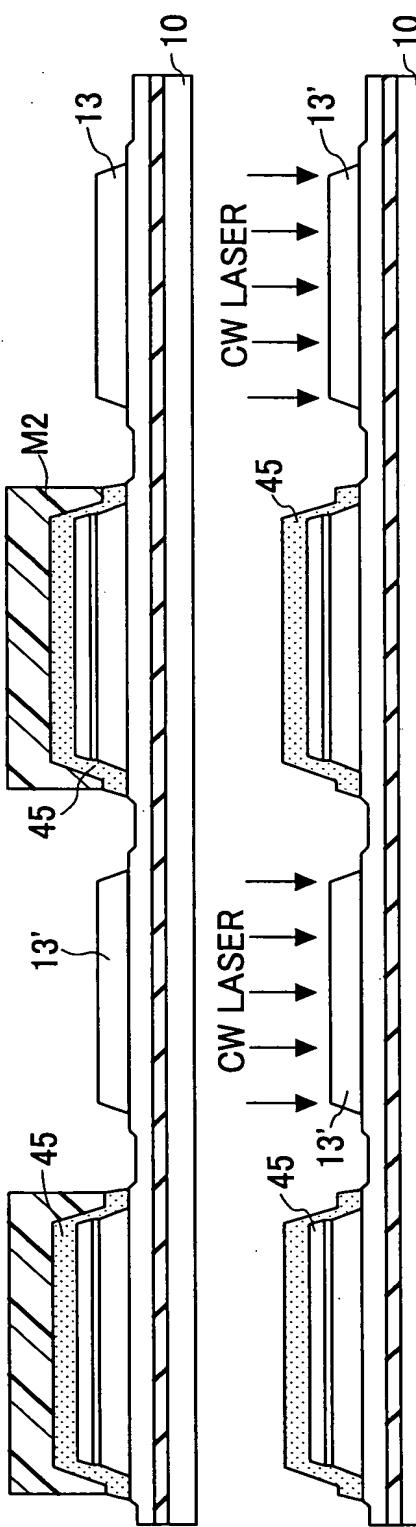


FIG.20D

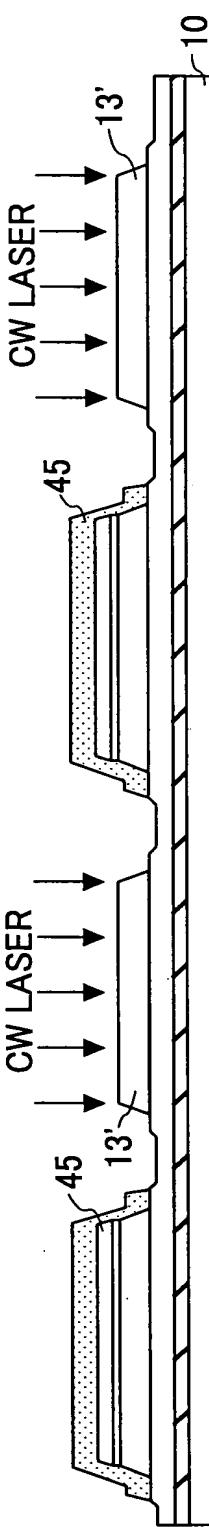


FIG.20E

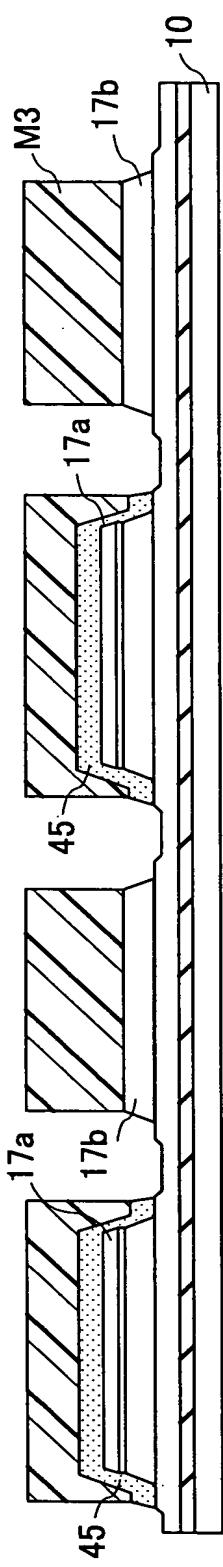


FIG.20F

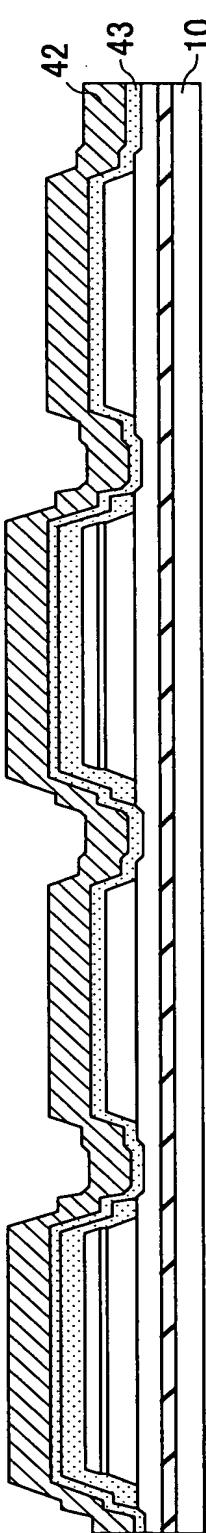


FIG.20G

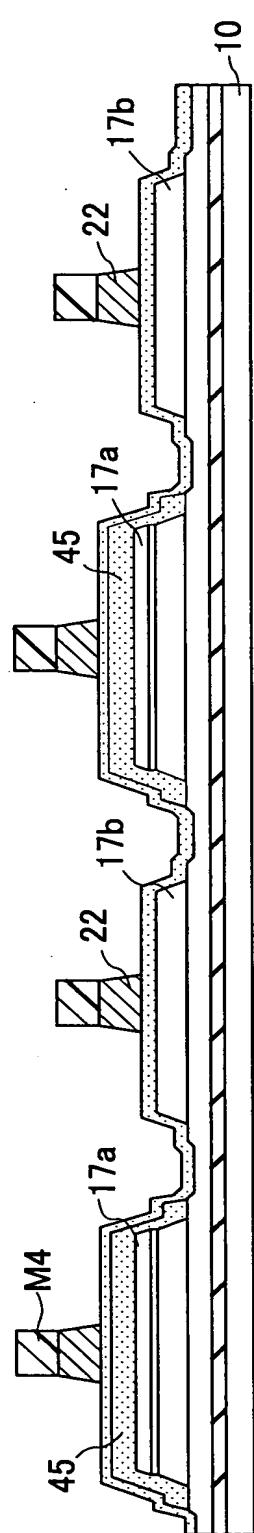


FIG.20H

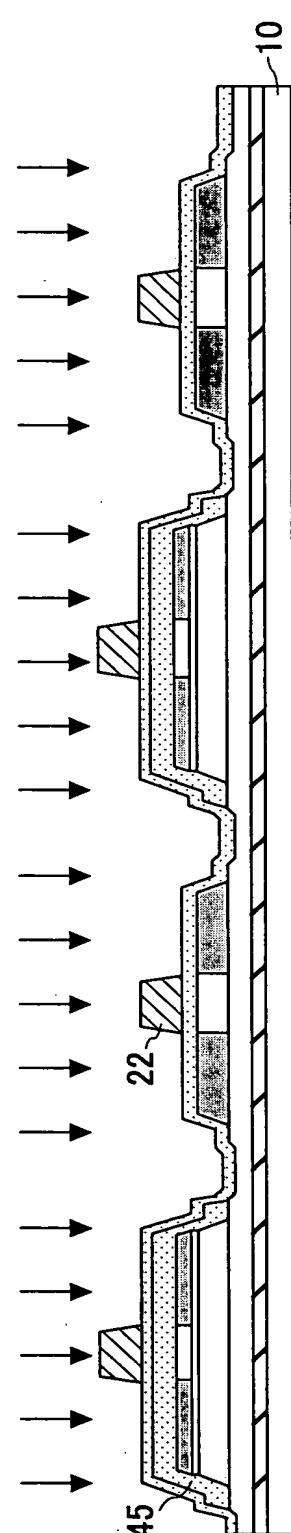


FIG.20I

LOW CONCENTRATION PION IMPLANTATION

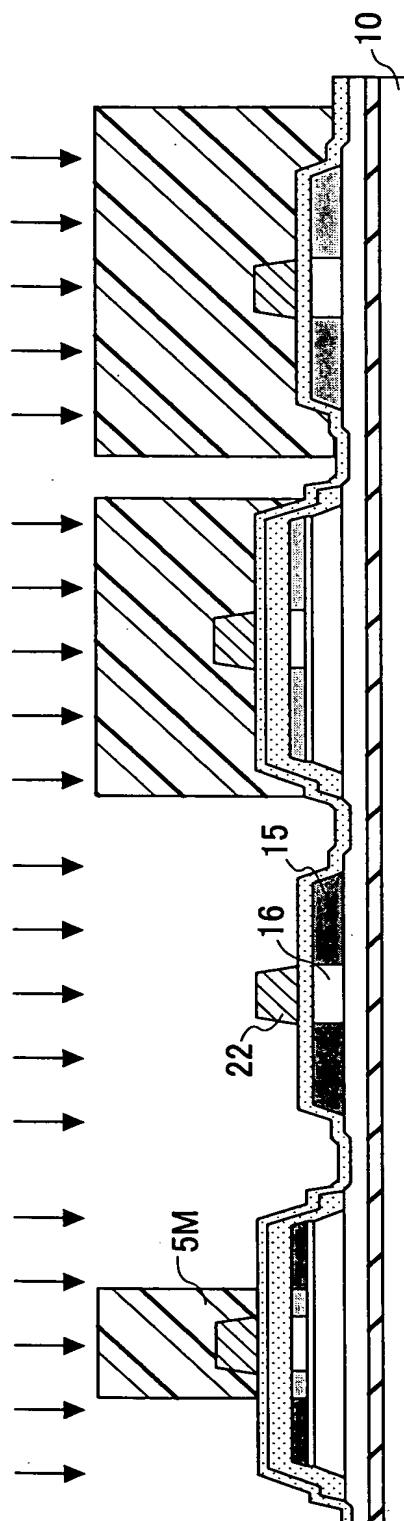


FIG.20J

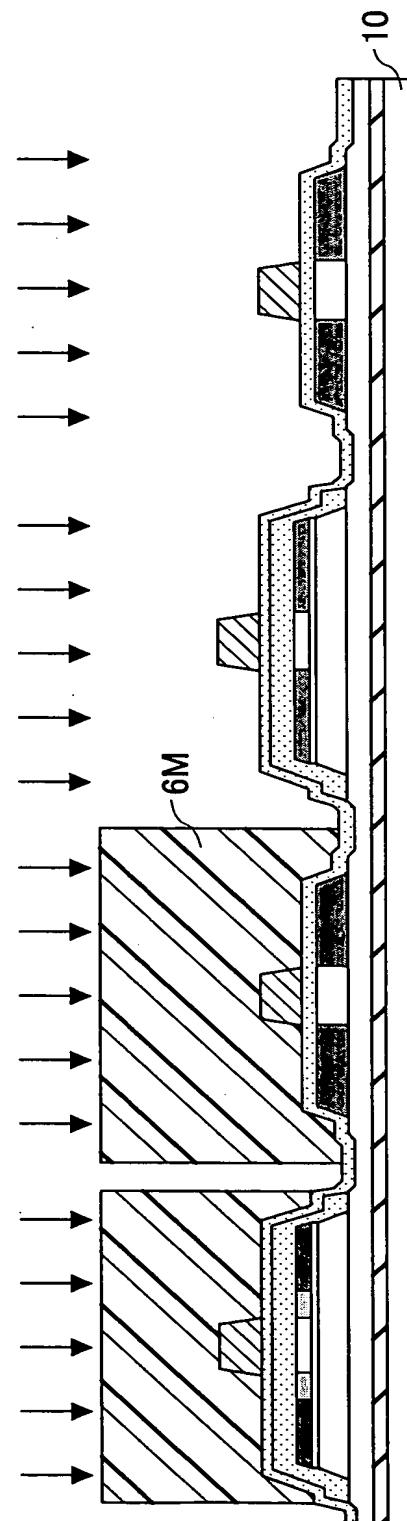


FIG.20K

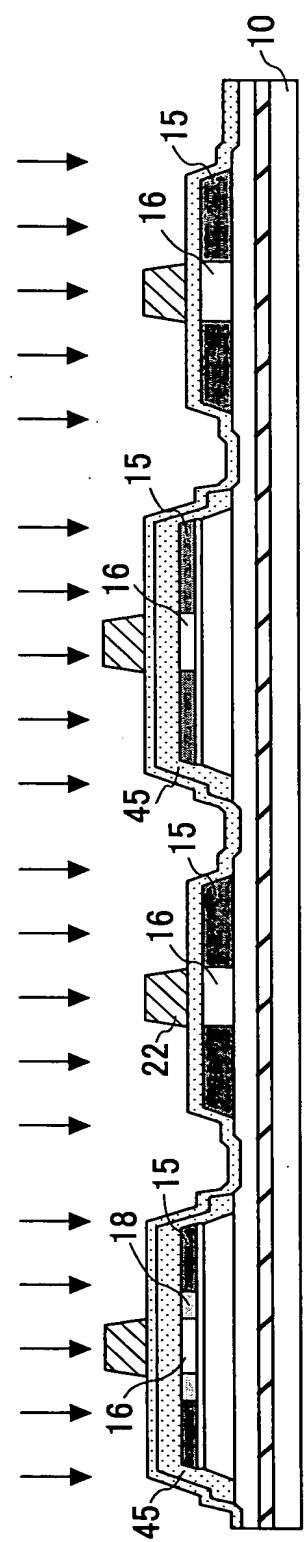


FIG.20L

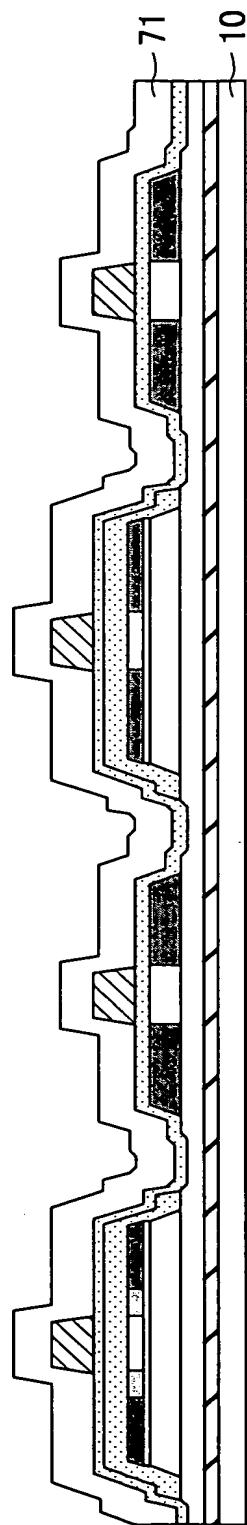


FIG.20M

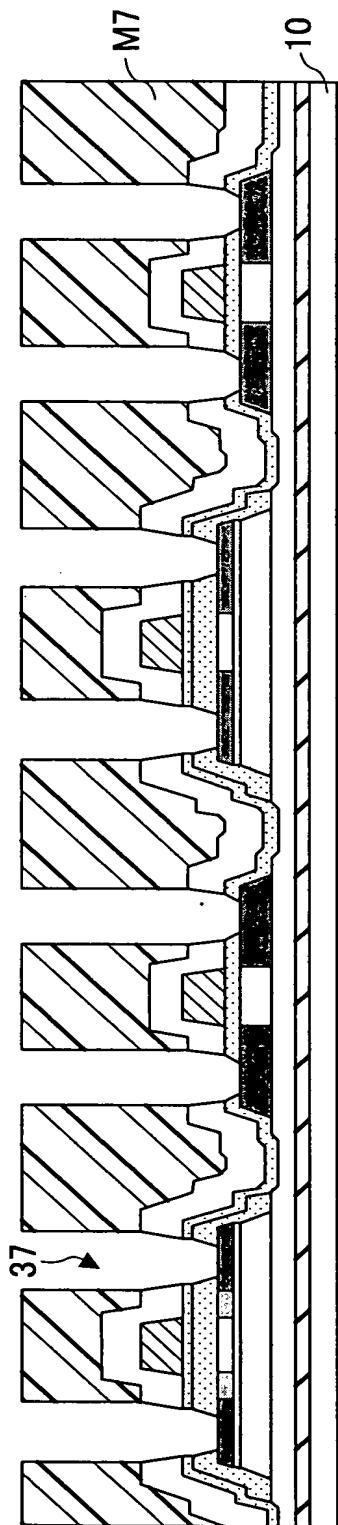


FIG.20N

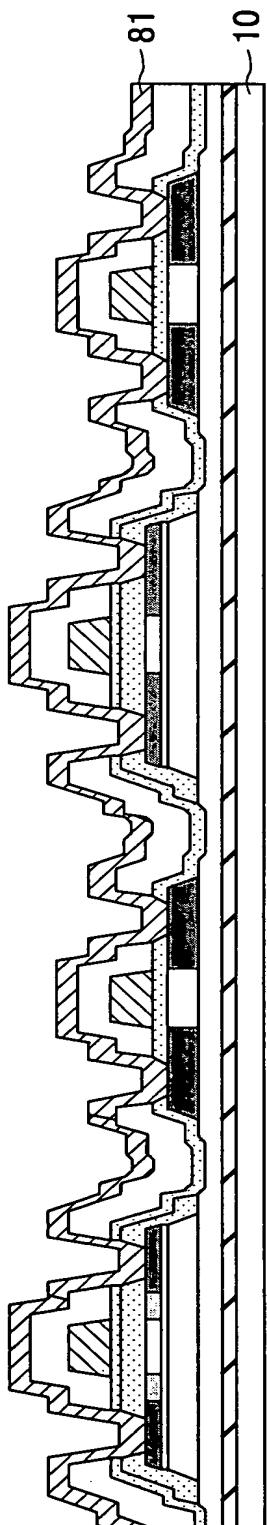


FIG.20O

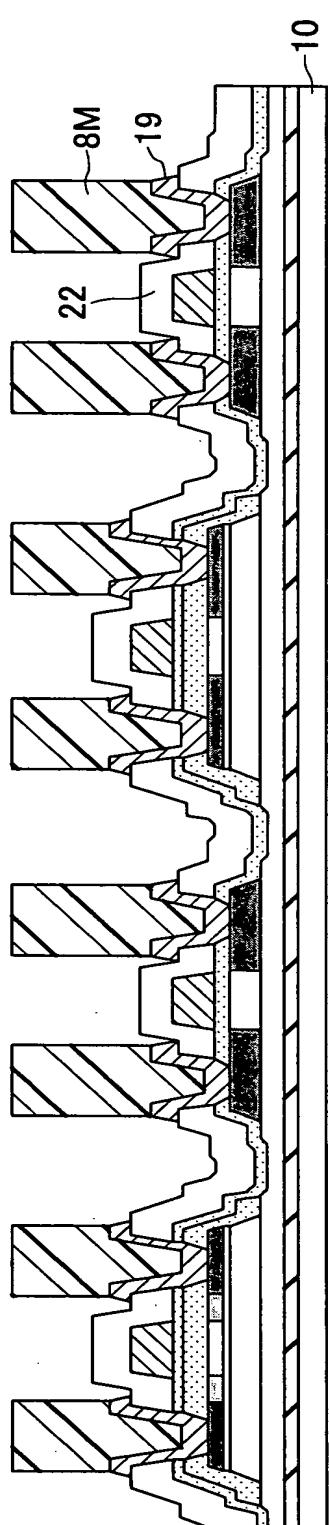


FIG.20P